STR-4800/4800SD

STR-4800SD
DOLBY FM

STR-4800

STR-4800SD
US Model
Canadian Model
STR-4800
AEP Model
UK Model
E Model

* STR-4800SD is equipped with DOLBY FM circuit. 'Dolby' and the double-D symbol are the trade marks of Dolby Laboratory Inc. Noise reduction system manufactured under license from Dolby Laboratory Inc.

FM STEREO/FM-AM RECEIVER

SPECIFICATIONS

GENERAL

Power Requirements: 120 V ac, 60 Hz (US and Canadian Model)
110, 127, 220 or 240 V ac ~ adjustable, 50/60 Hz (AEP, UK, E Model)

Power Consumption: 145 W (US Model)
240 VA (Canadian Model)
270 W (AEP, E Model)
290 W (UK Model)

AC Outlets: 2 unswitched, total 200W (US and Canadian Model)

Dimensions: Approx.
490 (w) x 170 (h) x 415 (d) mm
19 1/4 (w) x 6 9/16 (h) x 16 1/4 (d) inches
Including projecting parts and controls

Weight: Approx.
13.9 kg, 30 lb 10 oz (net)
Approx.
16.2 kg, 35 lb 11 oz (with shipping carton)

FM SECTION

Tuning Range: 87.5 MHz –108 MHz

Intermediate Frequency: 10.7 MHz

Sensitivity at 50 dB Quieting: 4 μV (MONO)
45 μV (STEREO)

Sensitivity at 46 dB Quieting: (40 kHz deviation) 50 μV (STEREO) (AEP, UK, E Model)

Usable Sensitivity: IHF 1.9 μV (MONO)
1.7 μV, S/N = 26 dB (40 kHz deviation) (AEP, UK, E Model)

S/N Ratio: 73 dB (MONO)
68 dB (STEREO)

Harmonic Distortion: at 100 Hz
0.2 % (MONO)
0.4 % (STEREO)
at 1 kHz
0.2 % (MONO)
0.4 % (STEREO)
at 10 kHz
0.2 % (MONO)
0.8 % (STEREO)

IM Distortion: 0.2 % (MONO)
0.4 % (STEREO)

Separation: 35 dB at 100 kHz
40 dB at 1 kHz
35 dB at 10 kHz

Frequency Response: 30 Hz–15 kHz $^{+0.2}_{-2.0}$ dB (US and Canadian Model)
40 Hz – 12.5 kHz $^{+0.2}_{-1.0}$ dB (AEP, UK, E Model)

Capture Ratio: 1.5 dB

AM Suppression Ratio: 54 dB

Image Response Ratio: 40 dB

IF Response Ratio: 90 dB

Spurious Response Ratio: 75 dB

RF Intermodulation: 60 dB

Sub-carrier Product Ratio: 60 dB

Muting Threshold: Approx. 5 μV

— continued on next page —

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SONY®
SERVICE MANUAL

STR-4800/4800SD

AM SECTION

Tuning Range: 530 kHz–1,605 kHz

Intermediate Frequency: 455 kHz (US, Canadian Model)
468 kHz (AEP, UK, E Model)

Usable Sensitivity: 250 μV/m, built-in ferrite-rod antenna
100 μV, external antenna at 1,000 kHz

S/N Ratio: 50 dB at 50 mV/m

Harmonic Distortion: 0.5 % at 50 mV/m, 400 Hz

Selectivity: 35 dB

Image Response Ratio: 40 dB at 1,000 kHz

IF Response Ratio: 35 dB at 1,000 kHz

AUDIO AMPLIFIER SECTION

Continuous RMS Power Output: (rated output) (less than 0.1 % THD)
Both channels driven simultaneously at 20–20,000 Hz
35 + 35 W (8 Ω)
At 1 kHz
40 + 40 W (8 Ω) (AEP, E Model)
50 + 50 W (4 Ω) (UK Model)
According to DIN 45500
40 + 40 W (8 Ω) (AEP, E Model)
45 + 45 W (4 Ω) (UK Model)

Dynamic Power Output: (IHF constant power supply method)
120 W (8 Ω) (AEP, UK, E Model)
170 W (4 Ω) (AEP, E Model)

Power Bandwidth: 10–35,000 Hz, IHF (AEP, UK, E Model)

Damping Factor: 35 at 1 kHz (8 Ω)

Harmonic Distortion: Less than 0.1 % at rated output, Less than 0.1 % at 1 W output (AEP, UK, E Model)

IM Distortion: (60 Hz : 7 kHz = 4 : 1)
Less than 0.1 % at rated output
Less than 0.1 % at 1 W output

Residual Noise: Less than 0.1 μW

Frequency Response:

PHONO	RIAA equalization curve ± 1 dB
AUX TAPE 1, 2 REC/PB (input) (AEP, UK, E Model)	10 – 30,000 Hz $^{+0.5}_{-3.0}$ dB

Input Sensitivity, Impedance and S/N Ratio:

	Sensitivity	Impedance	S/N	Weighting network
PHONO	2.5 mV	50 kΩ	70 dB	A
AUX TAPE 1, 2 REC/PB (AEP, UK, E Model)	250 mV	100 kΩ	90 dB	A

Note: Measured with rated output power into 8 Ω loads (both channels driven simultaneously) at 1 kHz.

Output Level and Impedance:

	Output level	Impedance	Input level
REC OUT 1, 2	250 mV	4.7 kΩ	PHONO 2.5 mV
REC/PB (AEP, UK, E Model)	40 mV	82 kΩ	AUX, TAPE 1, 2, REC/PB (AEP, UK, E Model) 250 mV

HEADPHONES: Accepts 8–10,000 Ω headphones.

SPEAKER:
4–16 Ω speakers are suitable. (for the countries except for the U.K.)
8 Ω or more speakers are suitable (UK Model)

Tone Controls: BASS ±10 dB at 100 Hz, TREBLE ±10 dB at 10 kHz

Filters: HIGH 6 dB/oct. above 6 kHz, LOW 6 dB/oct. below 35 Hz

Acoustic Compensator: (att. 30 dB) LOW +9 dB at 50 Hz, PRESENCE +3 dB at 1 kHz, LOUDNESS +10 dB at 50 Hz, +3 dB at 10 kHz

MODEL IDENTIFICATION
– Specification Labels –

US model

SONY
FM STEREO / FM-AM RECEIVER
MODEL NO. STR-4800SD
FREQ. RANGE : FM 87.5-108 MHz AM 530-1605 kHz
IF : FM 10.7 MHz AM 455 kHz
AC 120V 60 Hz 145 W
SERIAL NO.
MADE IN JAPAN

Canadian model

SONY
FM STEREO / FM-AM RECEIVER
MODEL NO. STR-4800SD
FREQ. RANGE : FM 87.5-108 MHz AM 530-1605 kHz
IF : FM 10.7 MHz AM 455 kHz
AC 120V 60 Hz 240 VA
SERIAL NO.
MADE IN JAPAN

AEP/E model

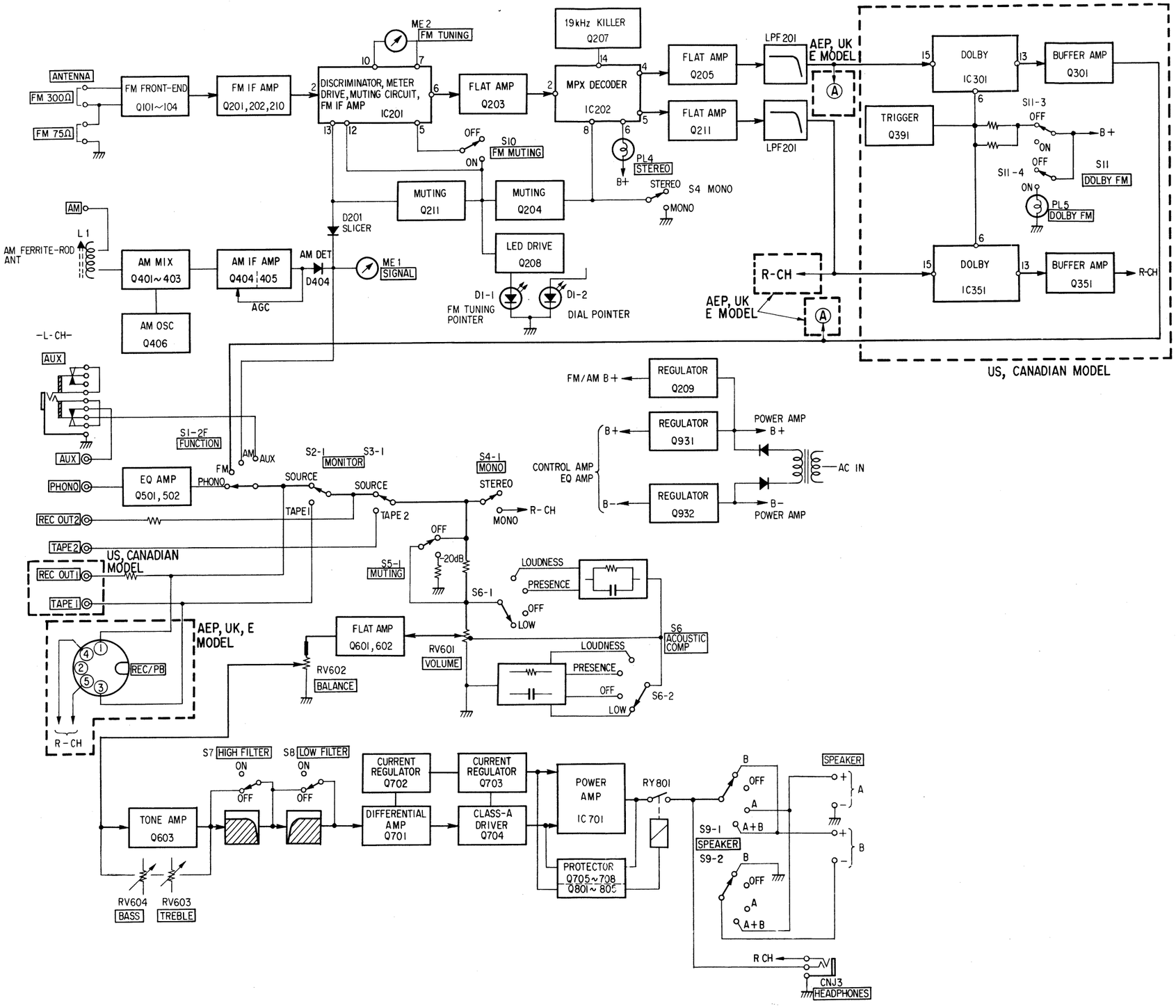
SONY
FM STEREO / FM-AM RECEIVER
MODEL NO. STR-4800
FREQ. RANGE : FM 87.5-108 MHz AM 530-1605 kHz
IF : FM 10.7 MHz AM 468 kHz
AC 110.127.220.240V~ 50/60 Hz 270 W
SERIAL NO.
MADE IN JAPAN

UK model

SONY
FM STEREO / FM-AM RECEIVER
MODEL NO. STR-4800
FREQ. RANGE : FM 87.5-108 MHz AM 530-1605 kHz
IF : FM 10.7 MHz AM 468 kHz
AC 110.127.220.240V~ 50/60 Hz 290 W
SERIAL NO.
MADE IN JAPAN

SECTION 1

BLOCK DIAGRAM

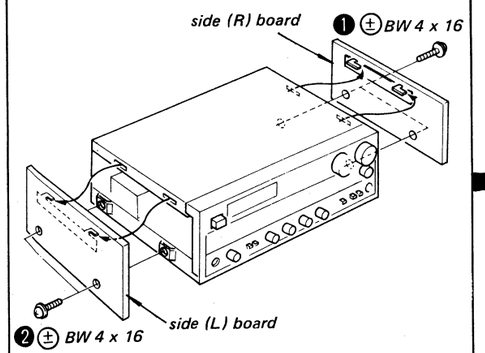


SECTION 2

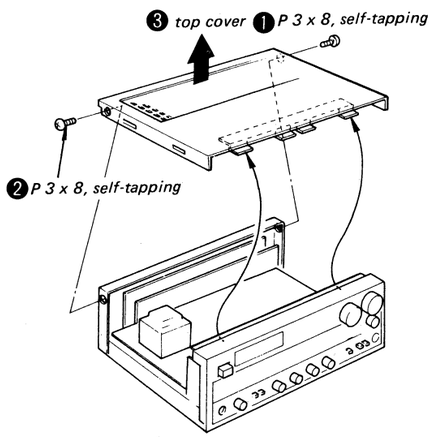
DISASSEMBLY AND REPLACEMENT

2-1. REMOVAL

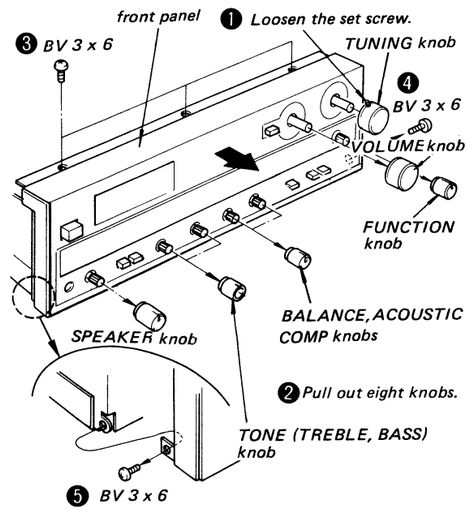
SIDE BOARDS REMOVAL



TOP COVER REMOVAL



FRONT PANEL REMOVAL



CIRCUIT BOARD REMOVAL

TONE Control, AUX Jack and HEADPHONES Jack Circuit Boards Removal.

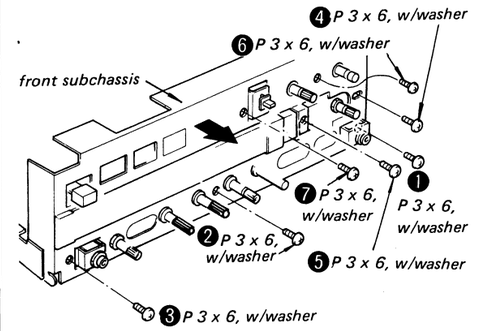
- Remove three screws (❶ – ❸). After removing the circuit boards from the front subchassis, replace the defective switch or jack.

FUNCTION Switch Circuit Board Removal

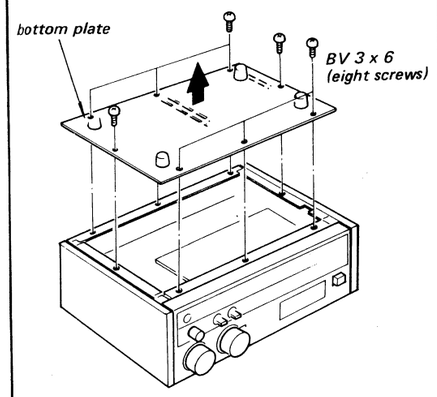
- Remove two screws (❹ , ❺). After removing the circuit board from the front subchassis replace the defective switch.

VOLUME CONTROL Circuit Board Removal

- Remove two screws (❻ , ❼). After removing the circuit board from the front suchassis, replace the defective control.

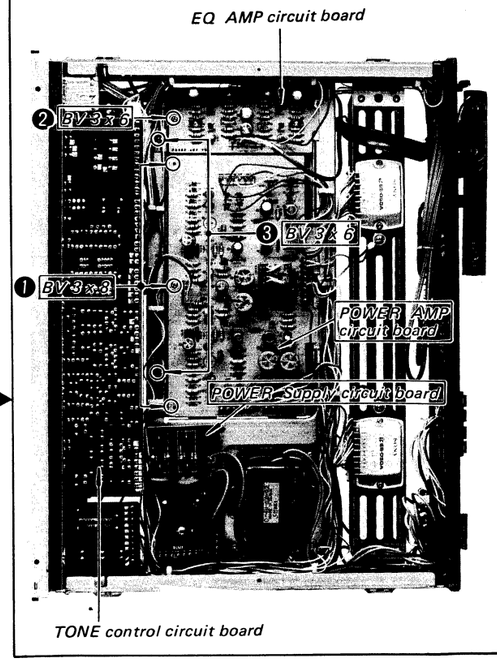


BOTTOM PLATE REMOVAL



CIRCUIT BOARD REMOVAL

❶ : POWER AMP Circuit Board Removal
❷ : EQ AMP Circuit Board Removal


EQ AMP circuit board
❷ BV 3 x 6
❸ BV 3 x 6
❶ BV 3 x 8
POWER AMP circuit board
POWER Supply circuit board
TONE control circuit board

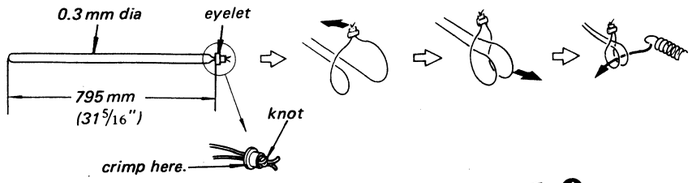
CIRCUIT BOARD REMOVAL

Replacement of the Components on the FM/AM Circuit Board.

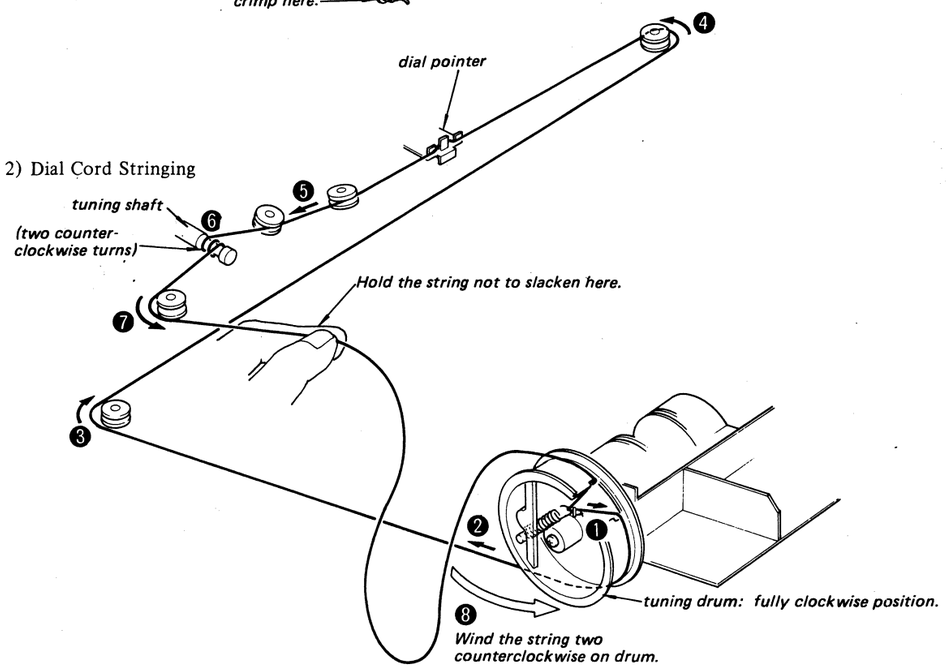
1. Remove two BV 3 x 6 screws ❸ securing the shield plate to the chassis.
2. It is possible to unsolder the components on the front-end circuit board.

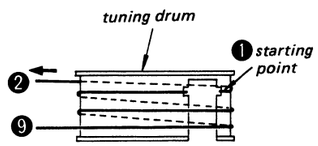
2-6. DIAL CORD STRINGING

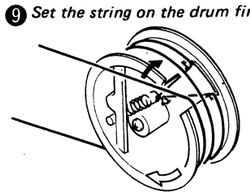
1) Dial Cord Length



2) Dial Cord Stringing


dial pointer
tuning shaft
(two counter-clockwise turns)
Hold the string not to slacken here.
tuning drum: fully clockwise position.
Wind the string two counterclockwise on drum.





SECTION 3

ALIGNMENTS AND ADJUSTMENTS

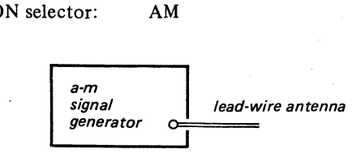
FM FREQUENCY COVERAGE AND TRACKING ADJUSTMENT

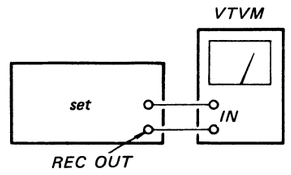
Never attempt alignment of the fm front-end section for the fm frequency coverage and tracking adjustment. If the fm frequency coverage and tracking adjustments are required, consult the factory service center.

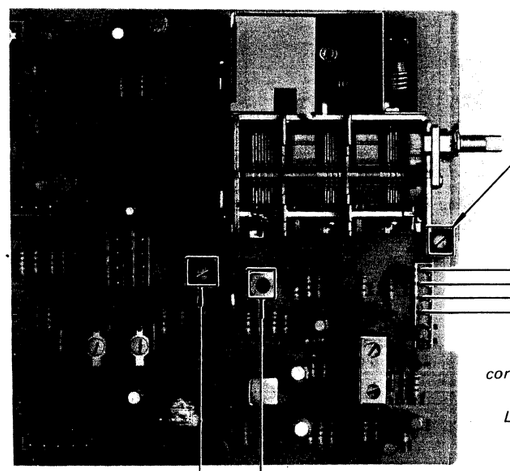
AM FREQUENCY COVERAGE AND AM TRACKING ADJUSTMENT

Test setup:

FUNCTION selector: AM







Step	AM TRACKING ADJUSTMENT
1	L1 (600 kHz)
2	CT401 (1,400 kHz)

Note: Repeat step 1 and 2 several times, and finish the alignment at step 2.

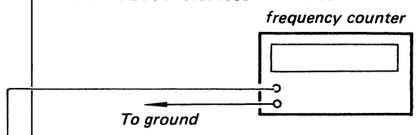
Step	AM FREQUENCY COVERAGE ADJUSTMENT	DIAL INDICATION
1	L403 (520 kHz)	Lower End
2	CT402 (1,680 kHz)	Upper End

Note: Repeat step 1 and 2 several times, and finish the alignment at step 2.

MPX ADJUSTMENT

Setup:

FUNCTION selector: FM



FM Signal Generator Setting:

Carrier frequency:	98 MHz
Modulation:	no modulation
Output level:	3.2 mV (70 dB)

Procedure:

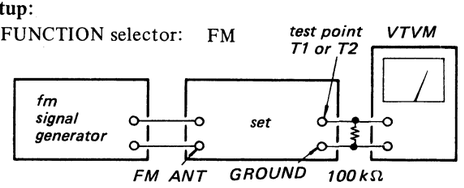
Adjust RT203 for 19 kHz ± 100 Hz on the counter.

Note: Perform this adjustment after the power switch turned ON and one minute passed.

FM OUTPUT LEVEL ADJUSTMENT

Setup:

FUNCTION selector: FM



FM Signal Generator Setting:

Carrier frequency:	98 MHz
Modulation:	400 Hz, 75 kHz deviation (100 %)
Output level:	1 mV (60 dB)

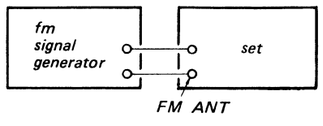
Procedure:

Adjust RT202 for 870 mV on the VTVM.

SIGNAL METER CALIBRATION

Setup:

FUNCTION selector: FM



FM Signal Generator Setting:

Carrier frequency:	98 MHz
Modulation:	no modulation
Output level:	3.2 mV (70 dB)

Procedure:

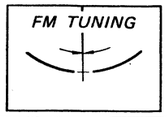
Tune the set to 98 MHz and adjust RT201 for specified pointer position on the SIGNAL meter as shown.

DISCRIMINATOR ALIGNMENT

Procedure:

FUNCTION selector: FM

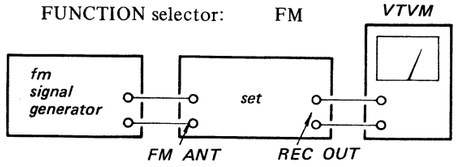
1. Detune the set.
2. Adjust the secondary side core of IFT201 for zero center on the TUNING meter as shown.



FM IF ALIGNMENT

Setup:

FUNCTION selector: FM

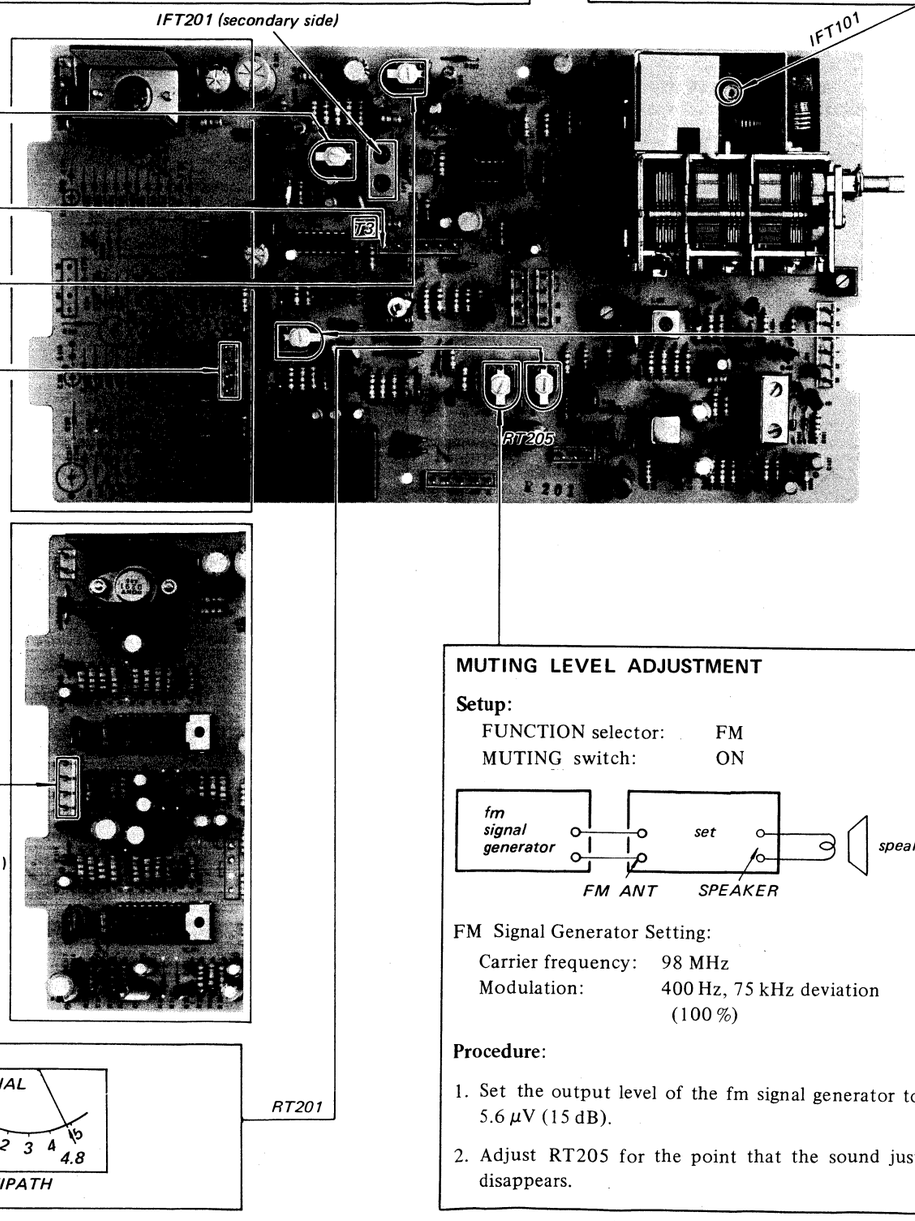


FM Signal Generator Setting:

Carrier frequency:	98 MHz
Modulation:	400 Hz, 75 kHz deviation (100 %)

Procedure:

Tune the set to 98 MHz and adjust IFT101 for maximum reading on the VTVM.



MUTING LEVEL ADJUSTMENT

Setup:

FUNCTION selector: FM

MUTING switch: ON

FM Signal Generator Setting:

Carrier frequency:	98 MHz
Modulation:	400 Hz, 75 kHz deviation (100 %)

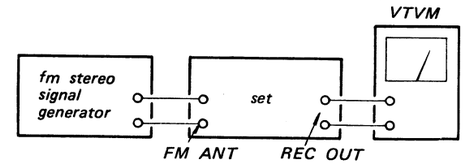
Procedure:

1. Set the output level of the fm signal generator to 5.6 μV (15 dB).
2. Adjust RT205 for the point that the sound just disappears.

FM STEREO SEPARATION ADJUSTMENT

Setup:

FUNCTION selector: FM



FM Stereo Signal Generator Setting:

Carrier frequency:	98 MHz
Output level:	1 mV (60 dB)
Mode:	Stereo
Audio (400 Hz) Mode:	67.5 kHz (90 %)
Pilot (19 kHz) Mode:	7.5 kHz (10 %)

Procedure:

FM stereo signal generator modulated channel	VTVM connection	VTVM reading
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RT204 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RT204 for minimum reading.

Stereo separation: Ⓐ − Ⓑ , Ⓒ − Ⓓ .

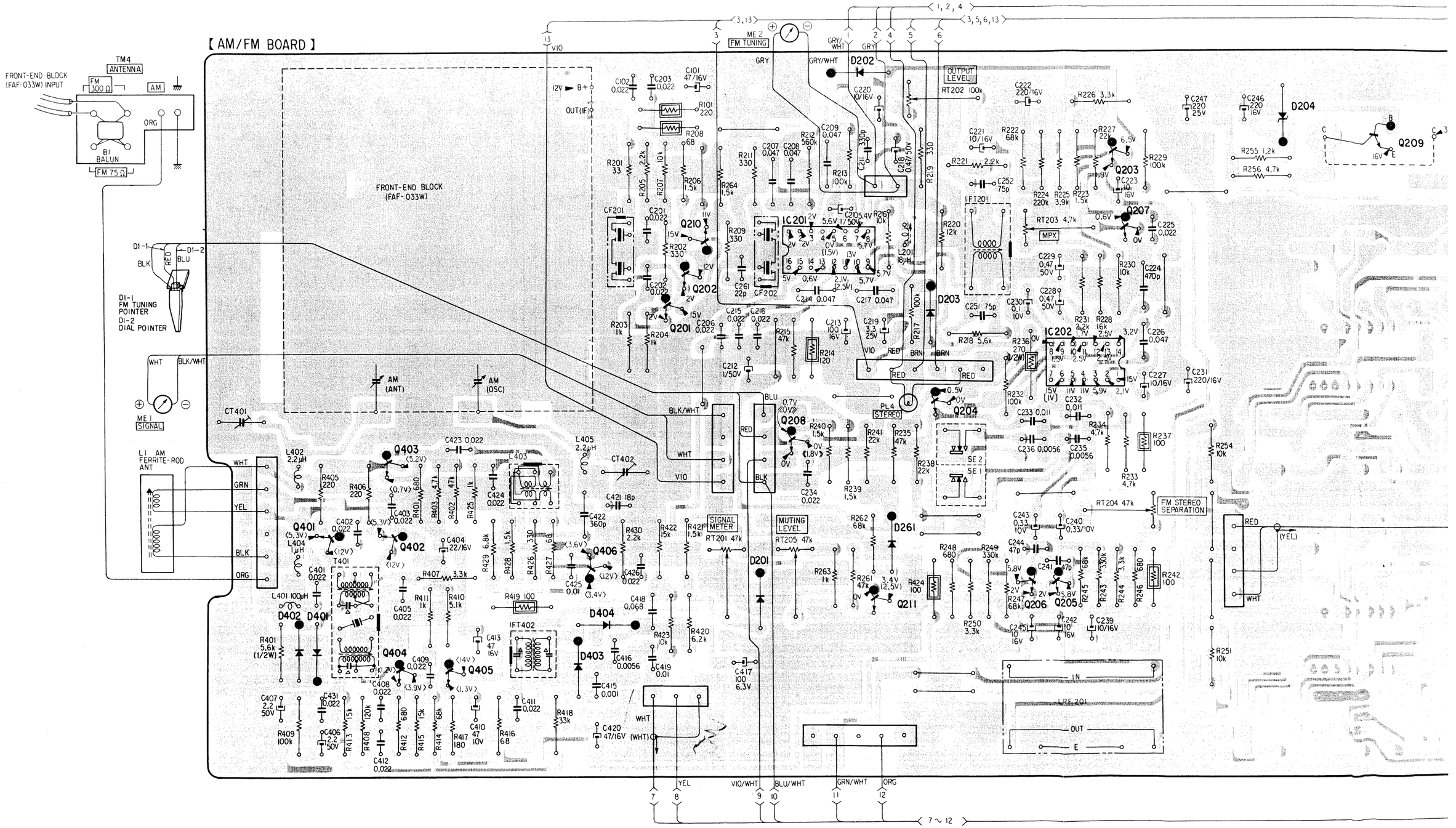
The difference of the stereo separation between Ⓐ − Ⓑ and Ⓒ − Ⓓ should be within 3 dB.

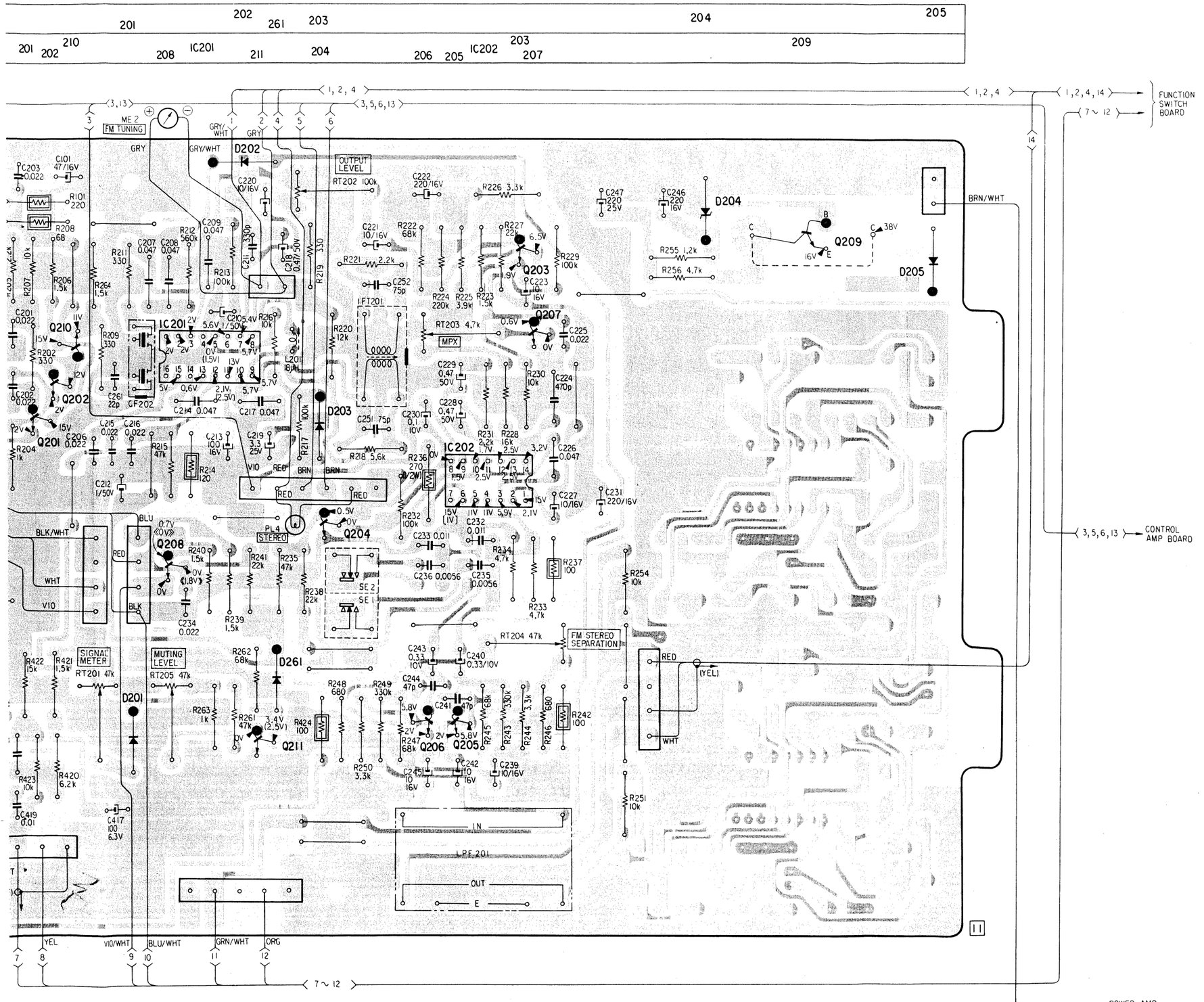
STR-4800 (AEP, UK, E Model)

4-1. MOUNTING DIAGRAM — Front-End, FM/AM Circuit Boards —

— Conductor Side —

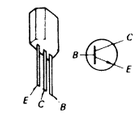
D	402,401 403 404 201 202 203 204
Q,IC	401 403 402 404 405 406 201 202 210 208 IC201 211 204 206 205 IC202 203 207 209



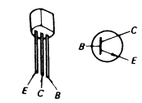


Q201, 202, 210, Q410 : 2SC403

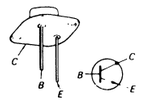
Q403 : 2SC632A



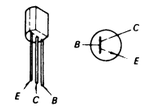
Q204, 207, 208, 211 : 2SC945



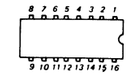
Q209: 2SD291



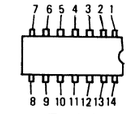
Q405, 406: 2SC710



IC201: HA1137W



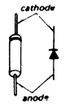
IC202: HA1156



D201, 202, 261, 401, 402 : 1T40

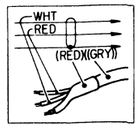
D203, 403, 404: 1T22A

D205: 10E2



D204: EQA01-16R

Note: • B+ pattern

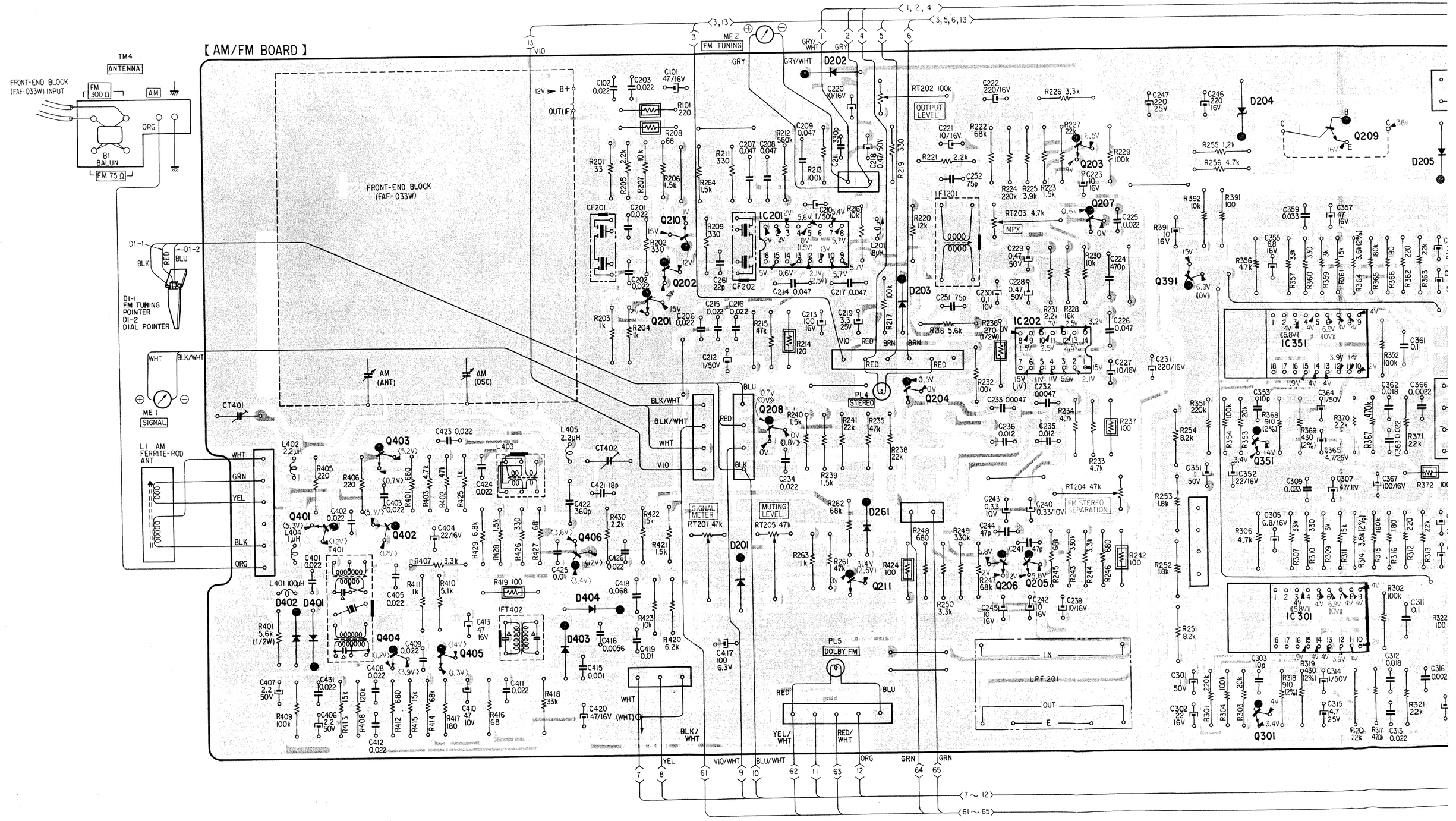


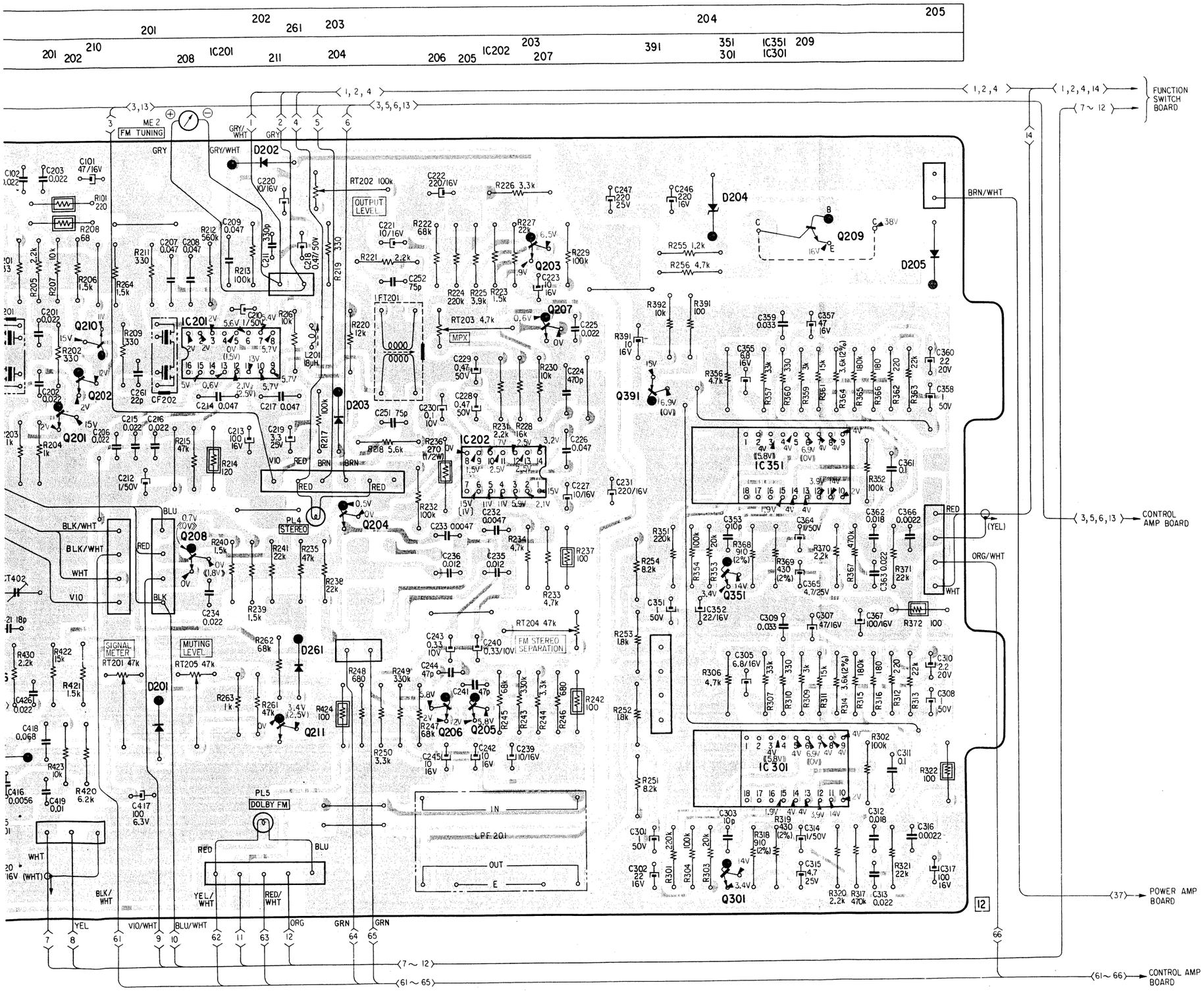
STR-4800SD (US, Canadian Model)

4-2. MOUNTING DIAGRAM — Front-End, FM/AM Circuit Boards —

— Conductor Side —

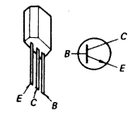
D	402,401	403	403 404	201	202 261	203	204	205
Q,IC	401	403 402 404 405	406	201 202 210	208 IC201	211	204	206 205 IC202 203 207	391	351 IC351 209 301 IC301


【AM/FM BOARD】
TM4
ANTENNA
FRONT-END BLOCK (FAF-033W) INPUT
FM 300Ω
AM
ORG
B1 BALUN
FM 75Ω
FRONT-END BLOCK (FAF-033W)
D1-1
D1-2
BLK
RED
BLU
D1-1 FM TUNING POINTER
D1-2 DIAL POINTER
WHT
BLK/WHT
ME 1
SIGNAL
L1 AM FERRITE-ROD ANT
GRN
YEL
BLK
ORG
CT401
AM (ANT)
AM (OSC)
ME 2
FM TUNING
12V B+
OUT(IF)
VIO
GRY
GRY/WHT
D202
OUTPUT LEVEL
RT202 100k
FT201
MPX
D203
D204
D205
Q209
Q207
Q203
Q204
Q391
IC201
IC202
IC351
IC301
PL4 STEREO
PL5 DOLBY FM
LPF 201
IN
OUT
E
Q208
Q210
Q202
Q201
Q206
Q205
Q211
D261
D201
SIGNAL METER
RT201 47k
MUTING LEVEL
RT205 47k
FM STEREO SEPARATION
RT204 47k
Q351
Q301
Q401
Q402
Q403
Q404
Q405
Q406
D401
D402
D403
D404
T401
IFT402
CF201
CF202
L401 100μH
L402 2.2μH
L403
L404 1μH
L405 2.2μH
CT402
R409 100k
R401 5.6k (1/2W)
R236 270 (1/2W)
R232 100k
R218 5.6k
R217 100k
R219 330
R264 1.5k
R250 3.3k
R242 100
R252 1.8k
R253 1.8k
R254 8.2k
R251 8.2k
R352 100k
R322 100
R420 6.2k
R419 100
R418 33k
R416 68
R417 180
R414 68k
R415 15k
R412 680
R408 120k
R413 15k
R407 3.3k
R411 1k
R410 5.1k
R429 6.8k
R428 1.5k
R426 330
R427 68
R430 2.2k
R422 15k
R421 1.5k
R423 10k
R214 120
R215 47k
R213 100k
R212 560k
R211 330
R209 330
R208 68
R206 1.5k
R205 2.2k
R207 10k
R201 33
R202 330
R203 1k
R204 1k
R240 1.5k
R241 22k
R235 47k
R238 22k
R239 1.5k
R262 68k
R263 1k
R261 47k
R248 680
R249 330k
R247 68k
R245 330k
R243 3.3k
R244 680
R246 680
R242 100
R255 1.2k
R256 4.7k
R222 68k
R221 2.2k
R220 12k
R224 220k
R225 3.9k
R223 1.5k
R227 22k
R229 100k
R226 3.3k
R228 16k
R231 2.2k
R230 10k
R234 4.7k
R233 4.7k
R237 100
R232 100k
R391 100
R392 10k
R391 10
R356 4.7k
R357 33k
R360 330
R359 3k
R361 15k
R364 3.6k(2%)
R365 180k
R366 180
R362 220
R363 22k
R306 4.7k
R307 33k
R310 330
R309 3k
R311 15k
R314 3.6k(2%)
R315 180k
R316 180
R312 220
R313 22k
R354 100k
R353 20k
R369 430 (2%)
R367 470k
R371 22k
R370 2.2k
R318 910 (2%)
R319 430 (2%)
R304 100k
R303 20k
R301 220k
R320 22k
R317 470k
R321 22k
C101 47/16V
C102 0.022
C203 0.022
R101 220
C201 0.022
C202 0.022
C261 22p
C206 0.022
C215 0.022
C216 0.022
C212 1/50V
C214 0.047
C217 0.047
C213 100 16V
C219 3.3 25V
C220 10/16V
C207 0.047
C208 0.047
C209 0.047
C210 1/50V
C211 330p
C208 0.047/50V
L201 18μH
C221 10/16V
C222 220/16V
C252 75p
C251 75p
C223 10 16V
C225 0.022
C229 0.47 50V
C228 0.47 50V
C230 0.1 10V
C224 470p
C226 0.047
C227 10/16V
C231 220/16V
C232 0.0047
C233 0.0047
C234 0.022
C236 0.012
C235 0.012
C243 0.33 10V
C240 0.33/10V
C244 47p
C241 47p
C242 10 16V
C239 10/16V
C245 10 16V
C247 220 25V
C246 220 16V
C359 0.033
C357 47 16V
C355 6.8 16V
C358 6.8 16V
C391 10 16V
C351 1 50V
C352 22/16V
C309 0.033
C307 47/16V
C367 100/16V
C305 6.8/16V
C301 50V
C302 22 16V
C303 10p
C314 1/50V
C315 4.7 25V
C316 0.002
C312 0.018
C313 0.022
C362 0.018
C366 0.0022
C361 0.1
C365 4.7/25V
C364 1/50V
C353 10p
C368 910 (2%)
C369 430 (2%)
C371 22k
C372 10
C311 0.1
C310 0.1
C401 0.022
C402 0.022
C403 0.022
C404 22/16V
C405 0.022
C406 2.2 50V
C407 2.2 50V
C408 0.022
C409 0.022
C410 47 10V
C411 0.022
C412 0.022
C413 47 16V
C418 0.068
C419 0.01
C420 47/16V
C415 0.001
C416 0.0056
C417 100 6.3V
C423 0.022
C424 0.022
C425 0.01
C426 0.022
C421 18p
C422 360p
C431 0.022
R405 220
R406 220
R403 4.7k
R402 47k
R401 680
R425 1k
R427 68
R428 1.5k
R429 6.8k
R426 330
R427 68
R430 2.2k
R422 15k
R421 1.5k
R423 10k
R420 6.2k
R419 100
R418 33k
R416 68
R417 180
R414 68k
R415 15k
R412 680
R408 120k
R413 15k
R407 3.3k
R411 1k
R410 5.1k
R409 100k
R401 5.6k (1/2W)
R236 270 (1/2W)
R232 100k
R218 5.6k
R217 100k
R219 330
R264 1.5k
R250 3.3k
R242 100
R252 1.8k
R253 1.8k
R254 8.2k
R251 8.2k
R352 100k
R322 100
R420 6.2k
R419 100
R418 33k
R416 68
R417 180
R414 68k
R415 15k
R412 680
R408 120k
R413 15k
R407 3.3k
R411 1k
R410 5.1k
R429 6.8k
R428 1.5k
R426 330
R427 68
R430 2.2k
R422 15k
R421 1.5k
R423 10k
R214 120
R215 47k
R213 100k
R212 560k
R211 330
R209 330
R208 68
R206 1.5k
R205 2.2k
R207 10k
R201 33
R202 330
R203 1k
R204 1k
R240 1.5k
R241 22k
R235 47k
R238 22k
R239 1.5k
R262 68k
R263 1k
R261 47k
R248 680
R249 330k
R247 68k
R245 330k
R243 3.3k
R244 680
R246 680
R242 100
R255 1.2k
R256 4.7k
R222 68k
R221 2.2k
R220 12k
R224 220k
R225 3.9k
R223 1.5k
R227 22k
R229 100k
R226 3.3k
R228 16k
R231 2.2k
R230 10k
R234 4.7k
R233 4.7k
R237 100
R232 100k
R391 100
R392 10k
R391 10
R356 4.7k
R357 33k
R360 330
R359 3k
R361 15k
R364 3.6k(2%)
R365 180k
R366 180
R362 220
R363 22k
R306 4.7k
R307 33k
R310 330
R309 3k
R311 15k
R314 3.6k(2%)
R315 180k
R316 180
R312 220
R313 22k
R354 100k
R353 20k
R369 430 (2%)
R367 470k
R371 22k
R370 2.2k
R318 910 (2%)
R319 430 (2%)
R304 100k
R303 20k
R301 220k
R320 22k
R317 470k
R321 22k
C101 47/16V
C102 0.022
C203 0.022
R101 220
C201 0.022
C202 0.022
C261 22p
C206 0.022
C215 0.022
C216 0.022
C212 1/50V
C214 0.047
C217 0.047
C213 100 16V
C219 3.3 25V
C220 10/16V
C207 0.047
C208 0.047
C209 0.047
C210 1/50V
C211 330p
C208 0.047/50V
L201 18μH
C221 10/16V
C222 220/16V
C252 75p
C251 75p
C223 10 16V
C225 0.022
C229 0.47 50V
C228 0.47 50V
C230 0.1 10V
C224 470p
C226 0.047
C227 10/16V
C231 220/16V
C232 0.0047
C233 0.0047
C234 0.022
C236 0.012
C235 0.012
C243 0.33 10V
C240 0.33/10V
C244 47p
C241 47p
C242 10 16V
C239 10/16V
C245 10 16V
C247 220 25V
C246 220 16V
C359 0.033
C357 47 16V
C355 6.8 16V
C358 6.8 16V
C391 10 16V
C351 1 50V
C352 22/16V
C309 0.033
C307 47/16V
C367 100/16V
C305 6.8/16V
C301 50V
C302 22 16V
C303 10p
C314 1/50V
C315 4.7 25V
C316 0.002
C312 0.018
C313 0.022
C362 0.018
C366 0.0022
C361 0.1
C365 4.7/25V
C364 1/50V
C353 10p
C368 910 (2%)
C369 430 (2%)
C371 22k
C372 10
C311 0.1
C310 0.1
C401 0.022
C402 0.022
C403 0.022
C404 22/16V
C405 0.022
C406 2.2 50V
C407 2.2 50V
C408 0.022
C409 0.022
C410 47 10V
C411 0.022
C412 0.022
C413 47 16V
C418 0.068
C419 0.01
C420 47/16V
C415 0.001
C416 0.0056
C417 100 6.3V
C423 0.022
C424 0.022
C425 0.01
C426 0.022
C421 18p
C422 360p
C431 0.022
R405 220
R406 220
R403 4.7k
R402 47k
R401 680
R425 1k
R427 68
R428 1.5k
R429 6.8

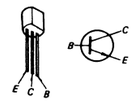


Q201, 202, 210, Q410 } : 2SC403

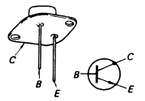
Q403 : 2SC632A



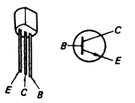
Q204, 207, 208, 211 } 2SC945



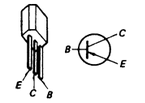
Q209: 2SD291



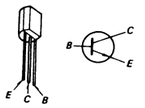
Q301, 351: 2SC900



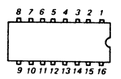
Q391: 2SA678



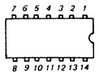
Q405, 406: 2SC710



IC201: HA1137W

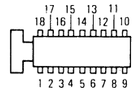


IC202: HA1156



(Top view)

IC301, 351: CX064

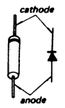


(Top view)

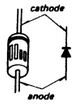
D201, 202, 261, 401, 402 } 1T40

D203, 403, 404: 1T22A

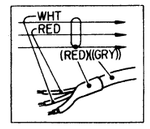
D205: 10E2



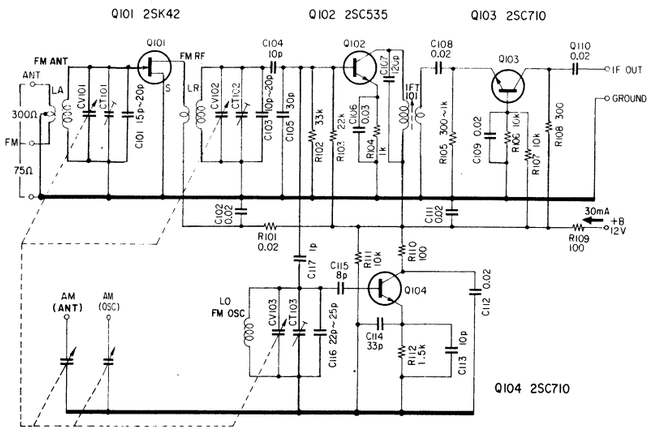
D204: EQA01-16R

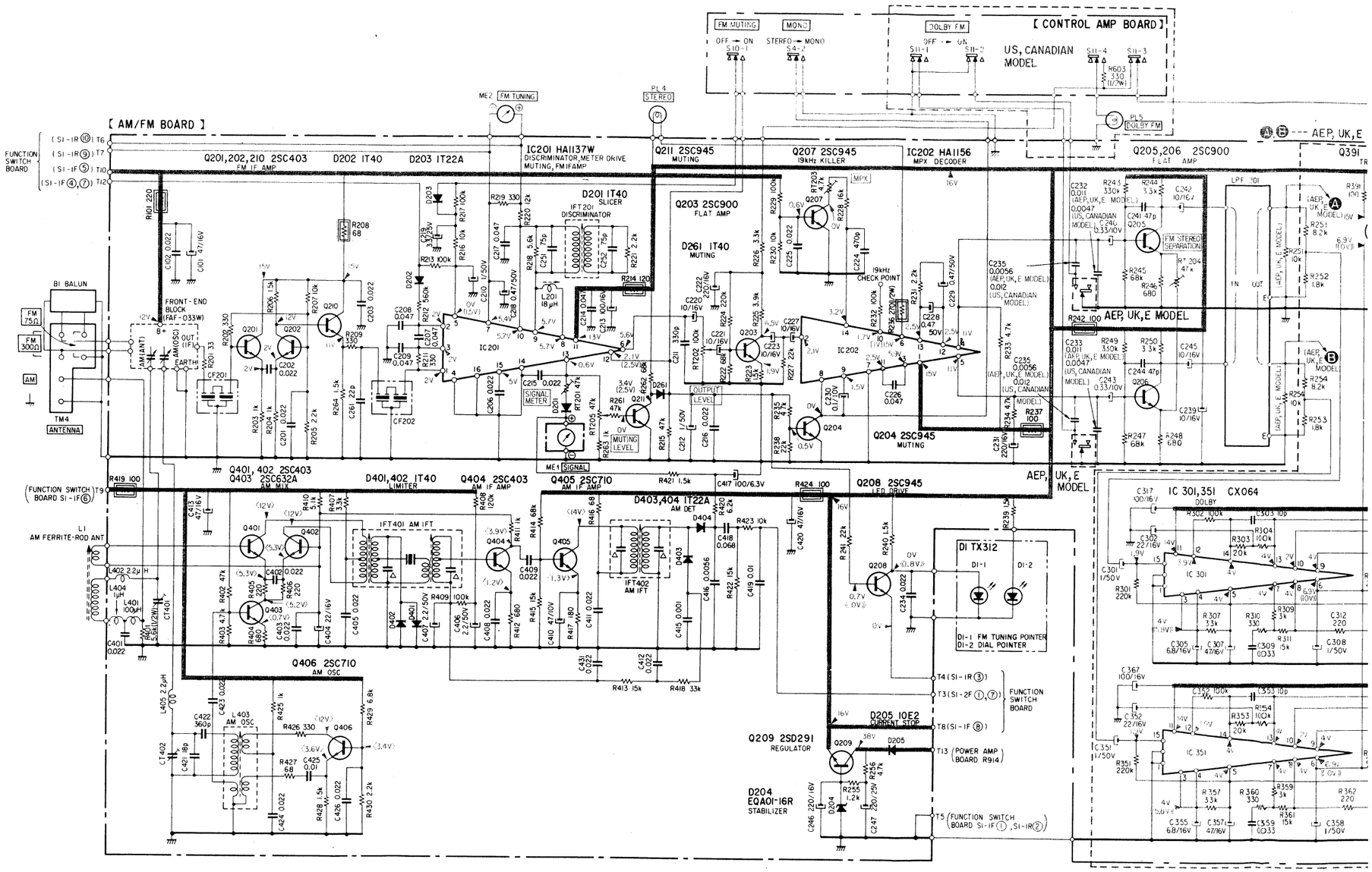


Note: • B+ pattern

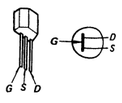


4-3. SCHEMATIC DIAGRAM — Front-End, FM/AM Section —

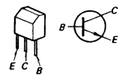




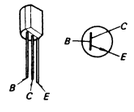
Q101: 2SK42

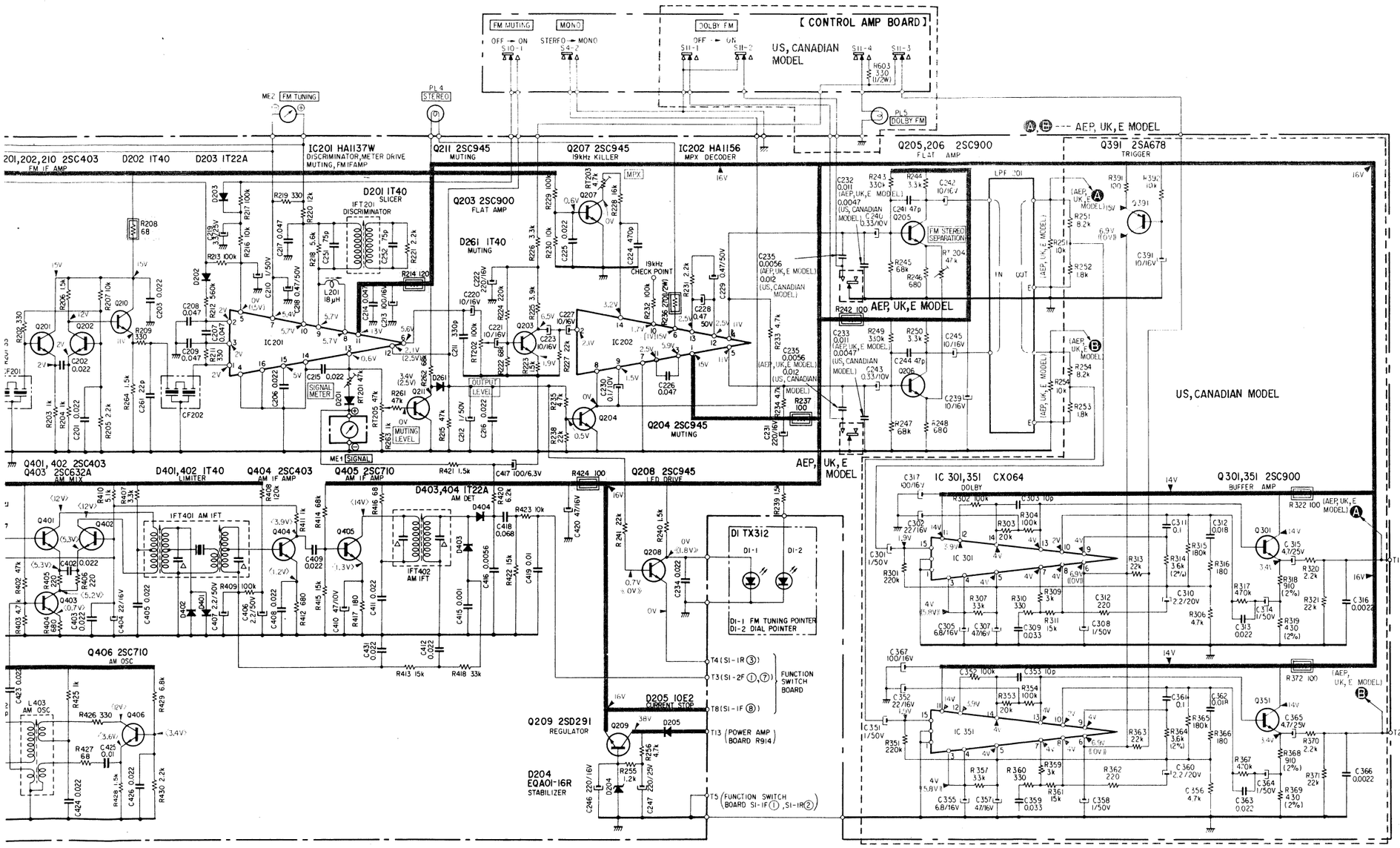


Q102: 2SC535



Q103, 104: 2SC710





Note:

- All capacitors are in μF unless otherwise noted. 50 or less working volts are omitted except for electrolytic type. p = μμF.
- All resistors are in Ω, ¼W, unless otherwise noted. k = 1,000 M = 1,000 k
- △ indicates internal components.
- ⏚ indicates chassis ground.
- ▭ indicates a nonflammable resistor.
- ▬ indicates B+ circuit.
- Voltage are measured by VOM (20 kΩ/v) in DC with respect to ground unless otherwise noted.
  - ≪ ≫: FM (monaural or stereo)
  - ( ): FM MUTING (S10) — ON (Detuned in FM)
  - (( )): DOLBY FM (S11) — ON (Detuned in FM)
  - [ ]: FM STEREO
  - < >: AM (Detuned)
  - no mark: FM (Detuned)
- Voltage variations may be noted due to normal production tolerances.
- Switch Mode:

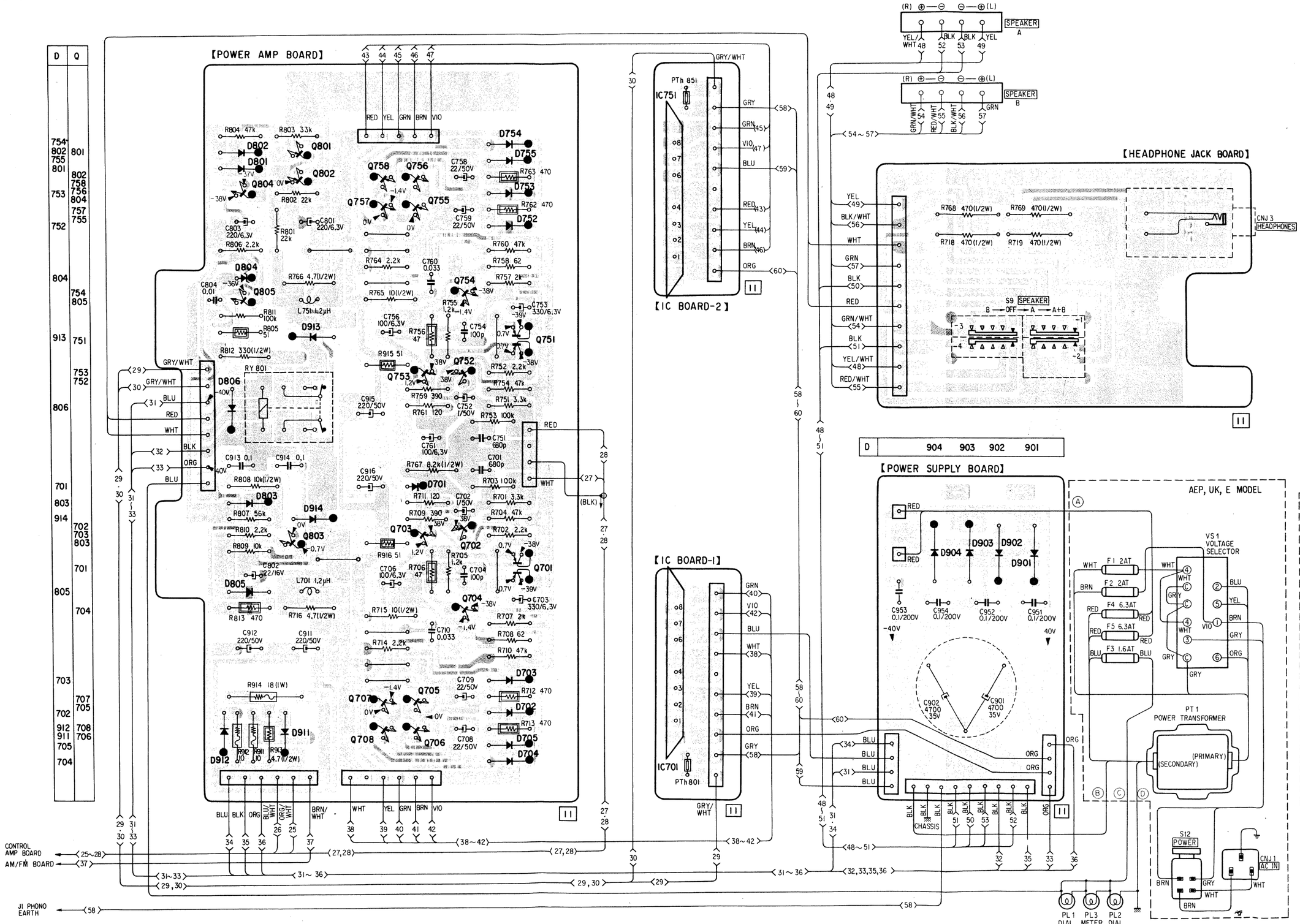
Ref. No.	Switch	Position
S4	MONO	STEREO
S10	FM MUTING	OFF
S11	DOLBY FM	OFF

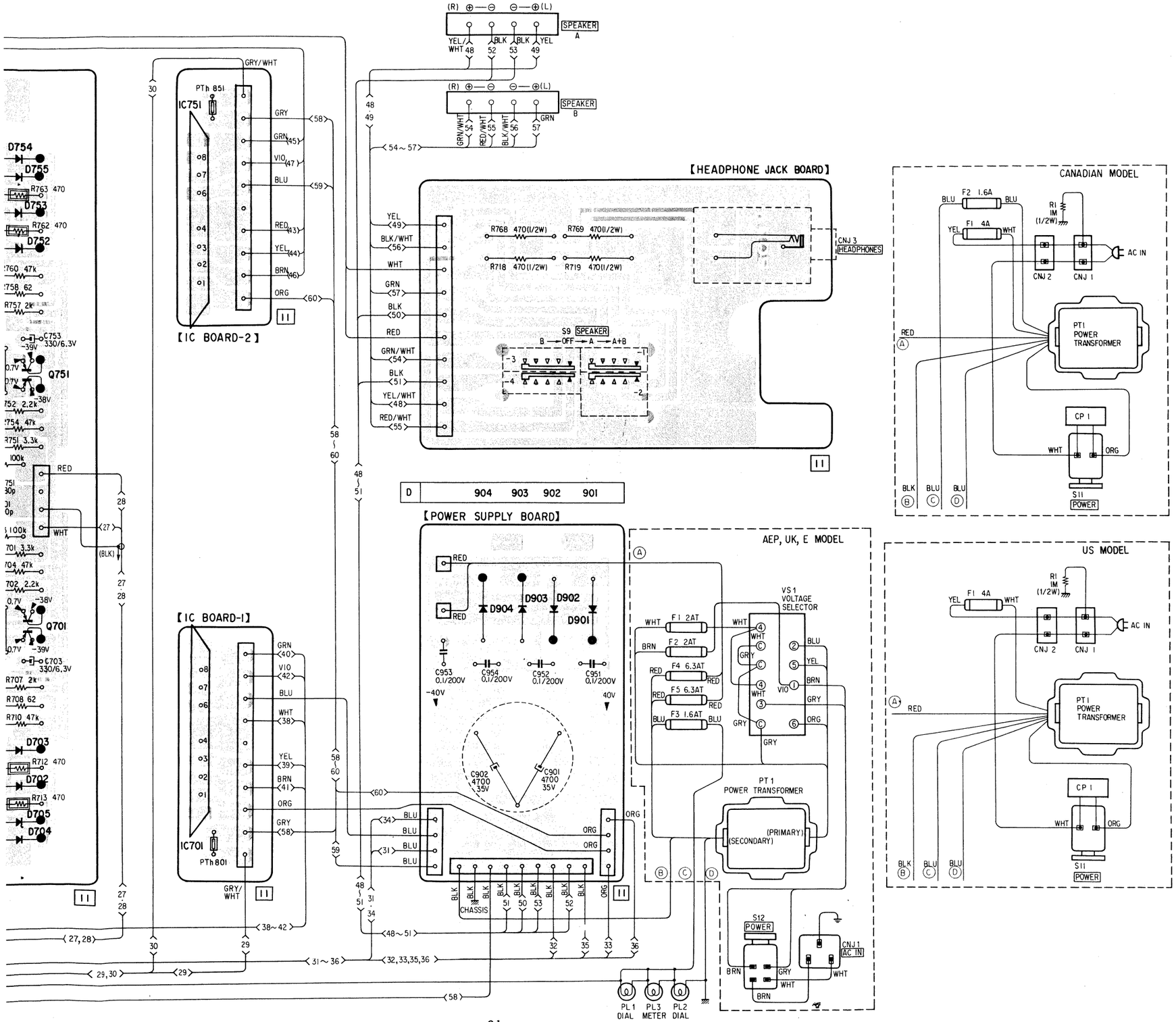
Note: The components identified by shading are critical for safety. Replace only with part number specified.

STR-4800/4800SD ST

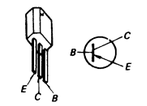
4-4. MOUNTING DIAGRAM — Power Amp, IC, Headphone Jack, Power Supply Circuit Boards —

— Conductor Side —

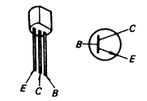




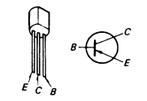
Q701, 751: 2SC705



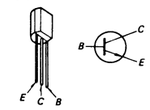
Q703, 753: 2SA896
Q704, 754 805 } **2SC1811**



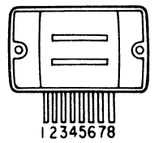
Q705, 708 755, 758 801～803 } **2SA735**



Q706, 707 756, 757 804 } **2SC1364**

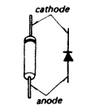


IC701, 751: SS050A

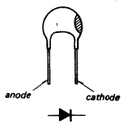


D702～705 752～755 801～803 805, 806 } **1S1555**

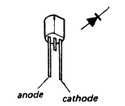
D911, 912: 10E2



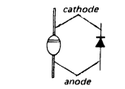
D701: VD1221



D804: 1T243M

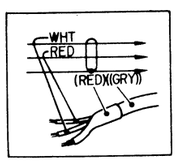


D901～904: U05E

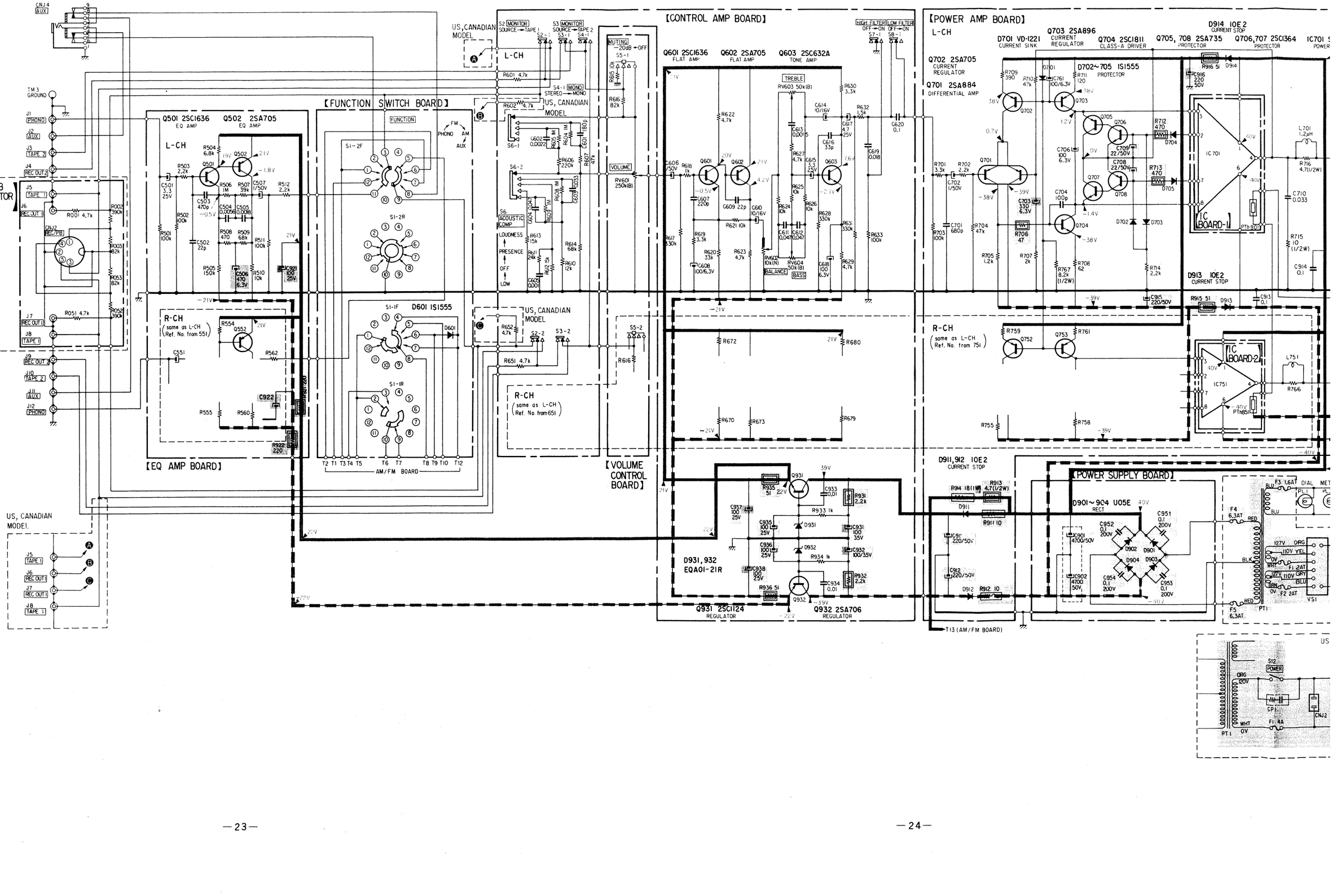


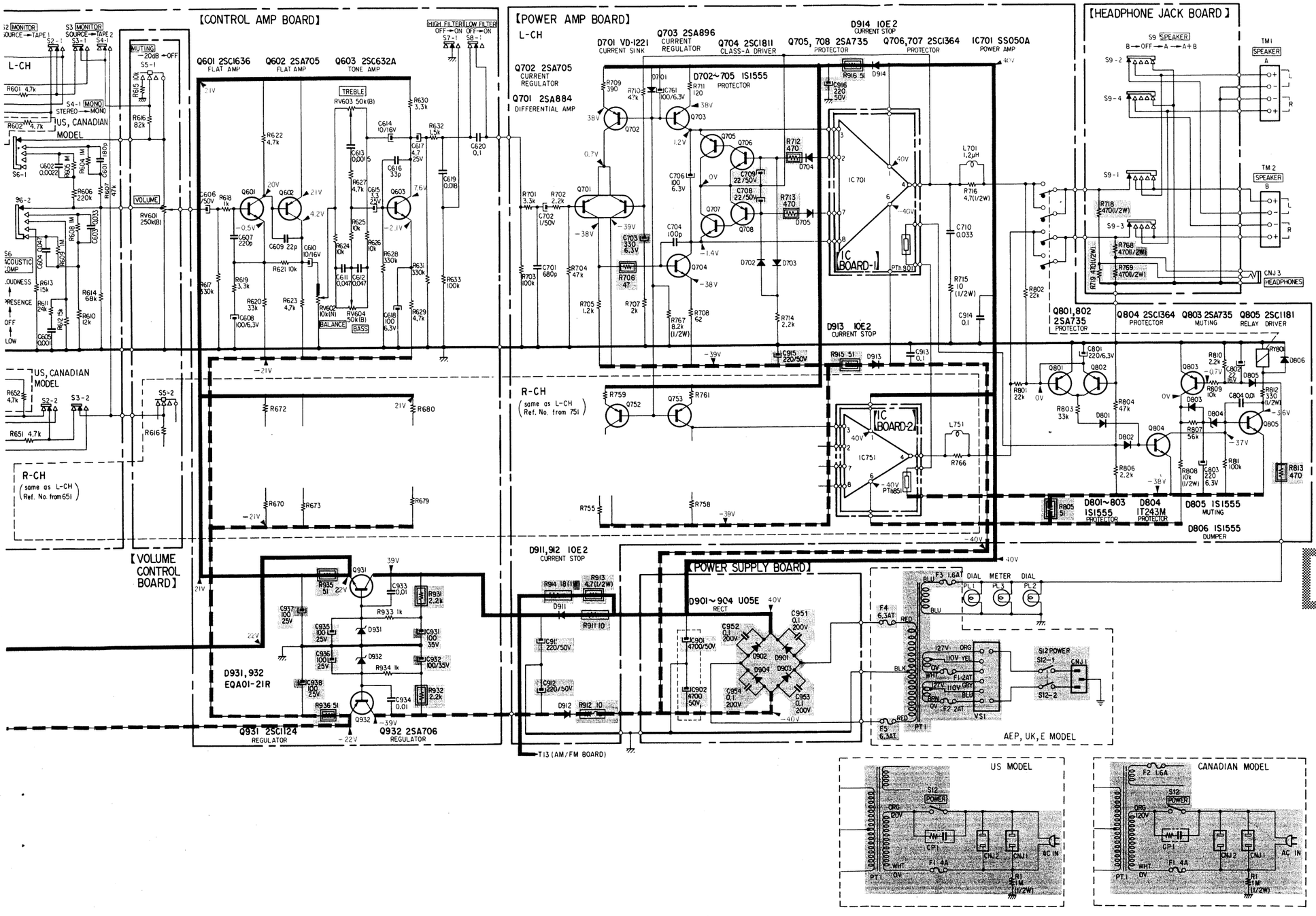
Note:

- B+ pattern
- B- pattern



4-5. SCHEMATIC DIAGRAM — Amplifier Section —





Note:

- All capacitors are in μF unless otherwise noted. 50 or less working volts are omitted except for electrolytic type. p = μμF.
- All resistors are in Ω, ¼ W, unless otherwise noted. k = 1,000 M = 1,000 k
- indicates chassis ground.
- indicates a nonflammable resistor.
- indicates a fusible resistor.
- indicates B+ circuit.
- indicates B− circuit.
- Voltages are DC with respect to ground unless otherwise noted. Readings taken under no-signal conditions with a VOM (20 kΩ/v). Measure the voltages after the power switch turned ON and 4–6 minutes passed for warm-up the set.
- Voltage variations may be noted due to normal production tolerances.
- Switch Mode:

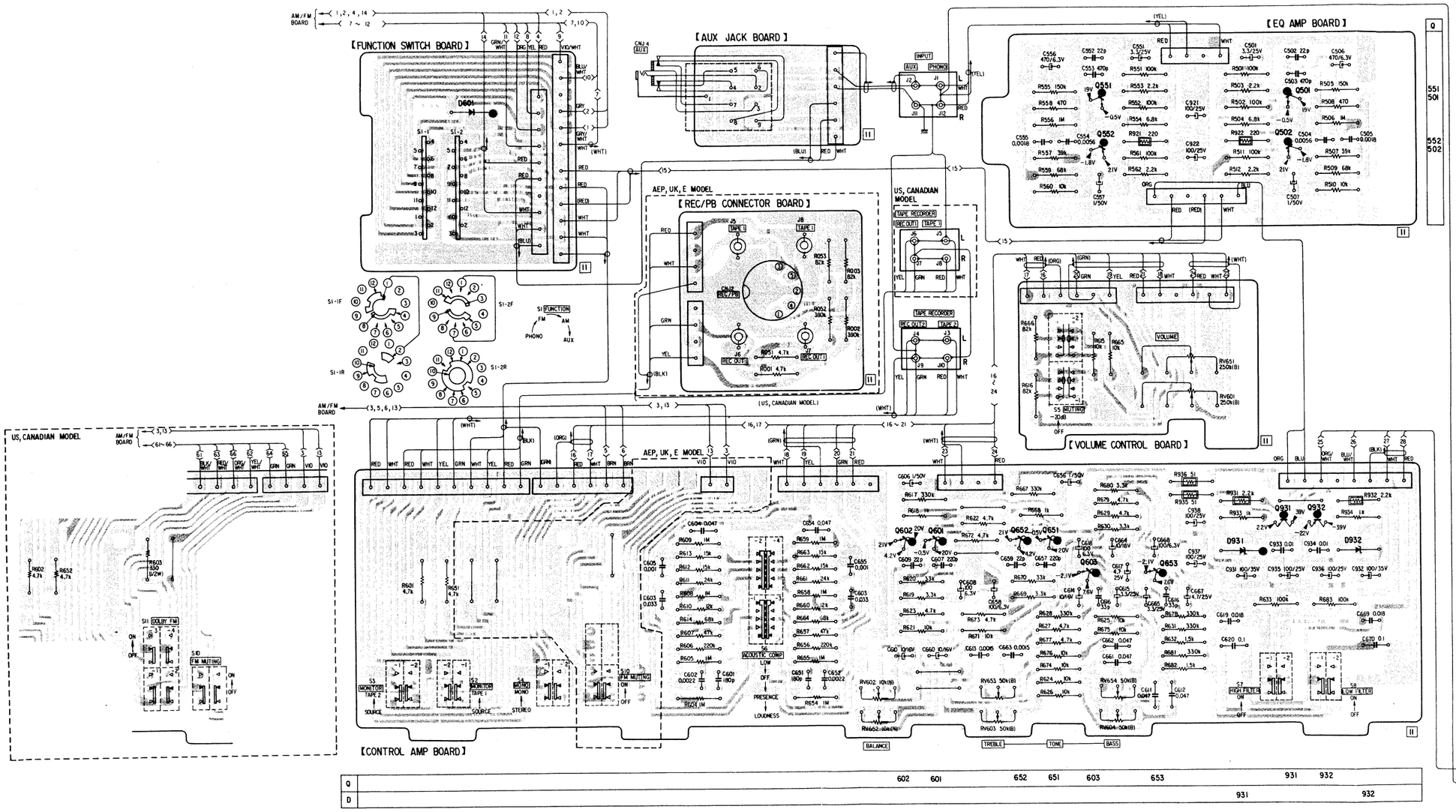
Ref. No.	Switch	Position
S1	FUNCTION	PHONO
S2	MONITOR	SOURCE
S3	MONITOR	SOURCE
S4	MONO	STEREO
S5	MUTING	OFF
S6	ACOUSTIC COMP	LOW
S7	HIGH FILTER	OFF
S8	LOW FILTER	OFF
S9	SPEAKER	B
S10	FM MUTING	OFF
S12	POWER	OFF

Note: The components identified by shading are critical for safety. Replace only with part number specified.

STR-4800/4800SD STR-4

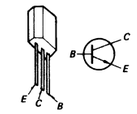
4-6. MOUNTING DIAGRAM — Function Switch, AUX Jack, REC/PB Connector, EQ Amp, Volume Control, Control Amp Circuit Boards —

— Conductor Side —

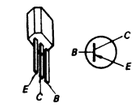


Q501, 551, 601, 651 } 2SC1636

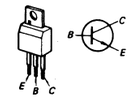
Q603, 653: 2SC632A



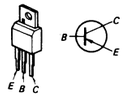
Q502, 552, 602, 652 } 2SA705



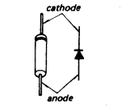
Q931: 2SC1124



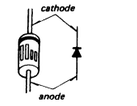
Q932: 2SA706



D601: 1S1555

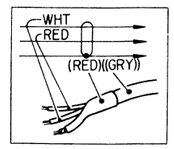


D931, 932: EQA01-21R

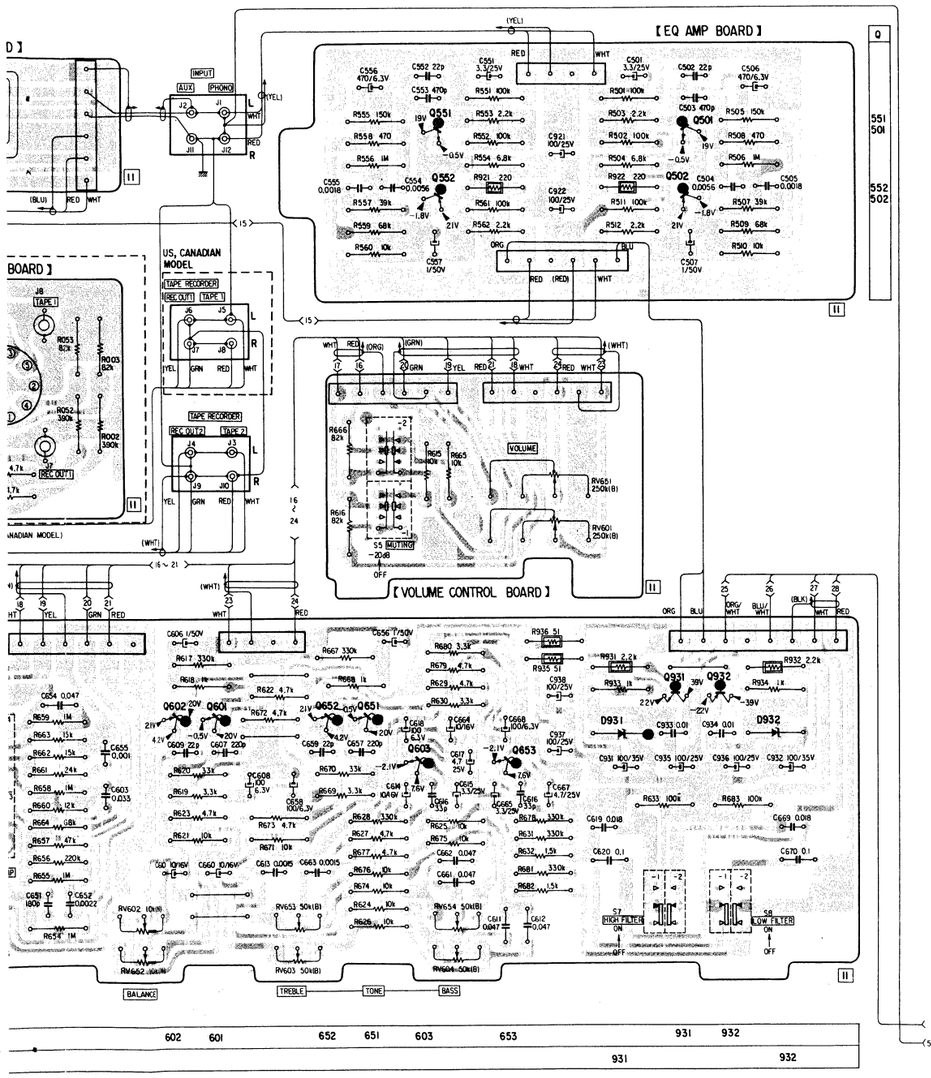


Note:

- : B+ pattern
- : B– pattern

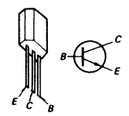


ntrol Amp Circuit Boards –

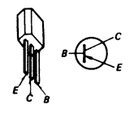


Q501, 551
601, 651 } 2SC1636

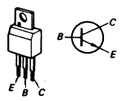
Q603, 653: 2SC632A



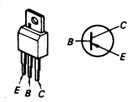
Q502, 552
602, 652 } 2SA705



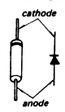
Q931: 2SC1124



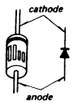
Q932: 2SA706



D601: 1S1555

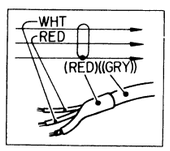


D931, 932: EQA01-21R

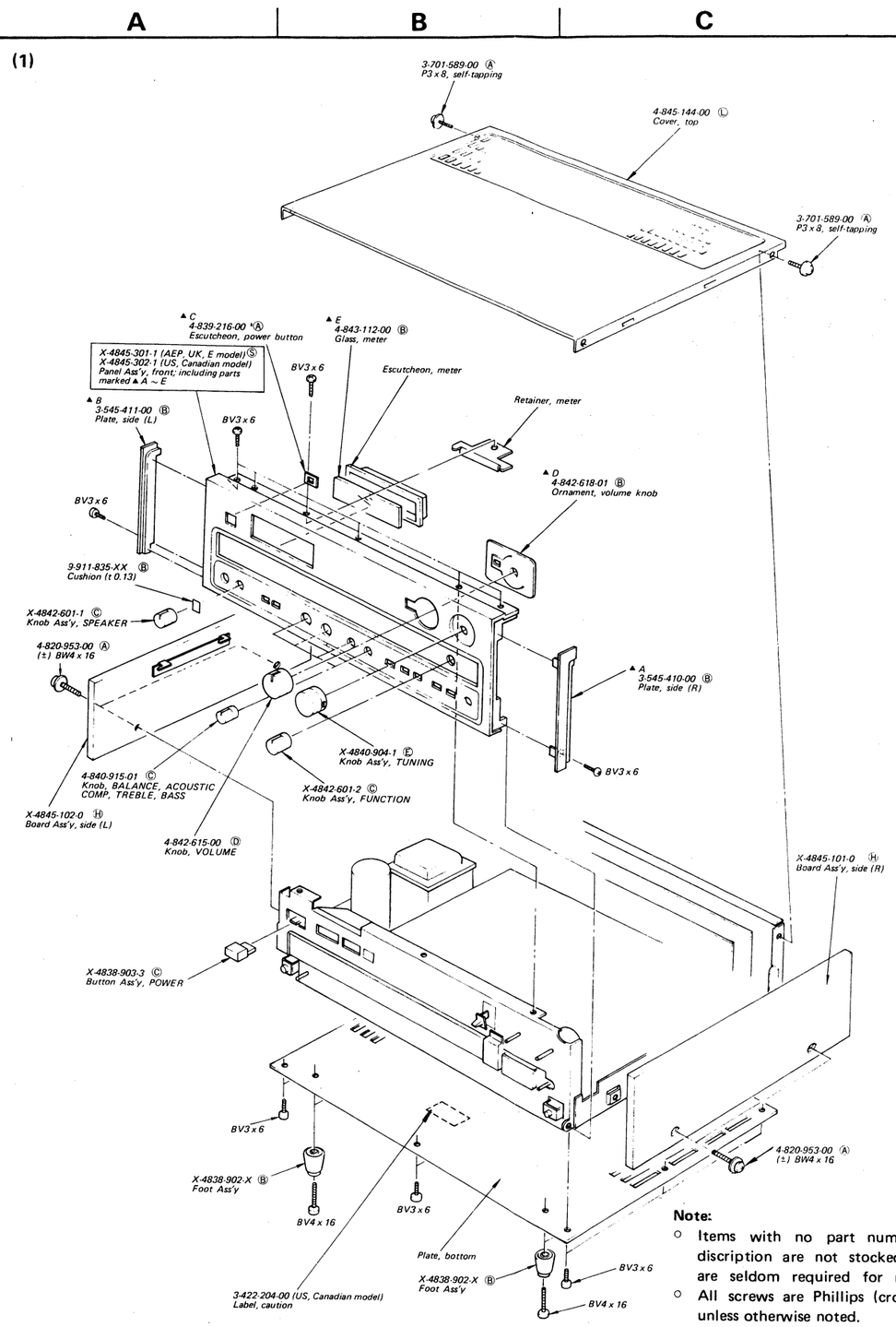


Note:

- : B+ pattern
- : B– pattern



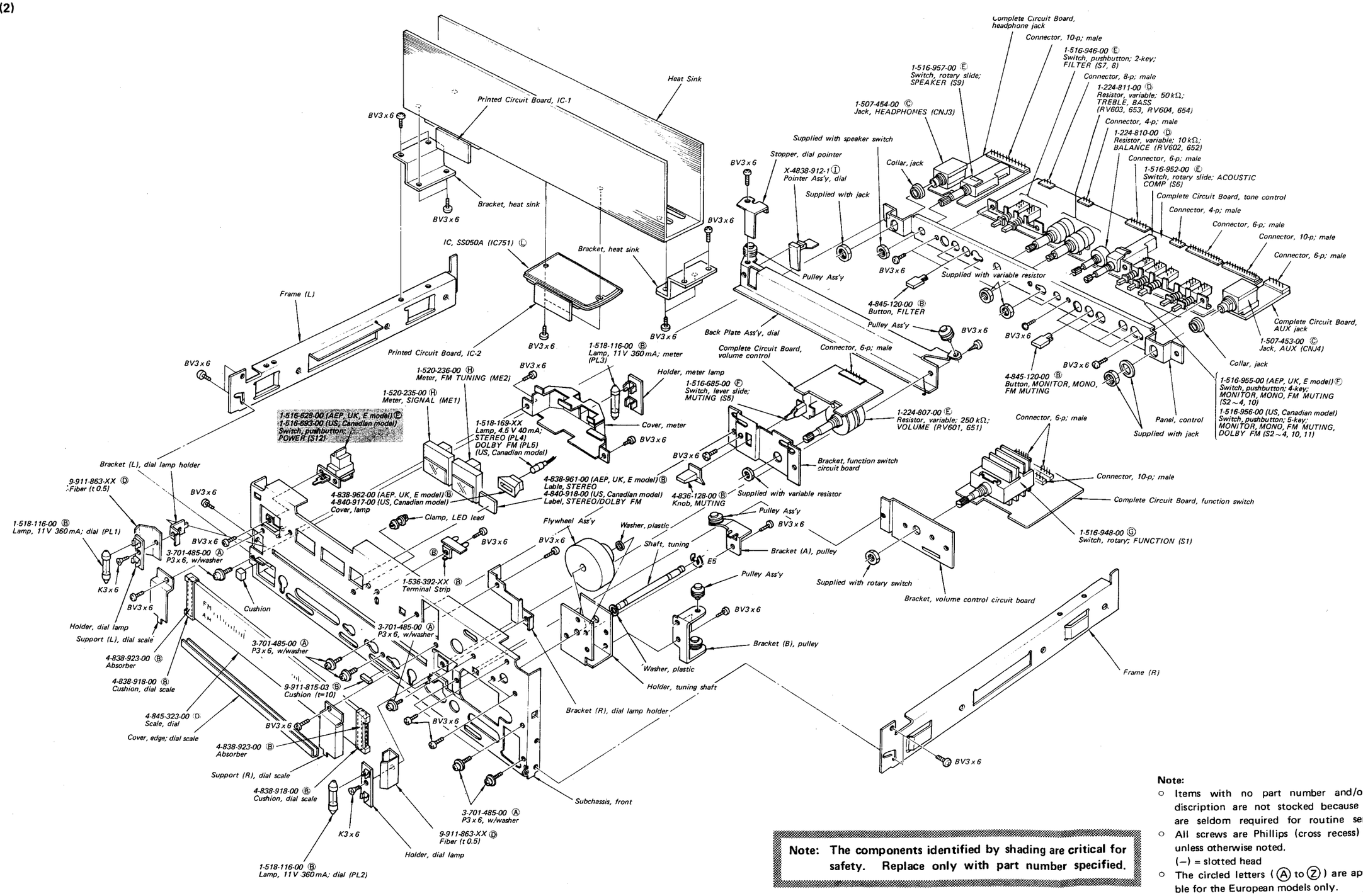
SECTION 5
EXPLODED VIEWS


A
B
C
1
2
3
4
5
(1)
3-701-589-00 Ⓐ P3 x 8, self-tapping
4-845-144-00 Ⓛ Cover, top
3-701-589-00 Ⓐ P3 x 8, self-tapping
▲C 4-839-216-00 *Ⓐ Escutcheon, power button
▲E 4-843-112-00 Ⓑ Glass, meter
X-4845-301-1 (AEP, UK, E model) Ⓢ
X-4845-302-1 (US, Canadian model)
Panel Ass'y, front, including parts marked ▲ A ~ E
BV3 x 6
Escutcheon, meter
Retainer, meter
▲B 3-545-411-00 Ⓑ Plate, side (L)
▲D 4-842-618-01 Ⓑ Ornament, volume knob
9-911-835-XX Ⓑ Cushion (t 0.13)
X-4842-601-1 Ⓒ Knob Ass'y, SPEAKER
4-820-953-00 Ⓐ (±) BW4 x 16
▲A 3-545-410-00 Ⓑ Plate, side (R)
X-4840-904-1 Ⓔ Knob Ass'y, TUNING
BV3 x 6
4-840-915-01 Ⓒ Knob, BALANCE, ACOUSTIC COMP, TREBLE, BASS
X-4842-601-2 Ⓒ Knob Ass'y, FUNCTION
X-4845-102-0 Ⓗ Board Ass'y, side (L)
4-842-615-00 Ⓓ Knob, VOLUME
X-4845-101-0 Ⓗ Board Ass'y, side (R)
X-4838-903-3 Ⓒ Button Ass'y, POWER
BV3 x 6
X-4838-902-X Ⓑ Foot Ass'y
BV4 x 16
BV3 x 6
4-820-953-00 Ⓐ (±) BW4 x 16
Plate, bottom
X-4838-902-X Ⓑ Foot Ass'y
BV3 x 6
BV4 x 16
3-422-204-00 (US, Canadian model) Label, caution

Note:

- Items with no part number and/or no discription are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (–) = slotted head
- The circled letters (Ⓐ to Ⓩ) are applicable for the European models only.

(2)

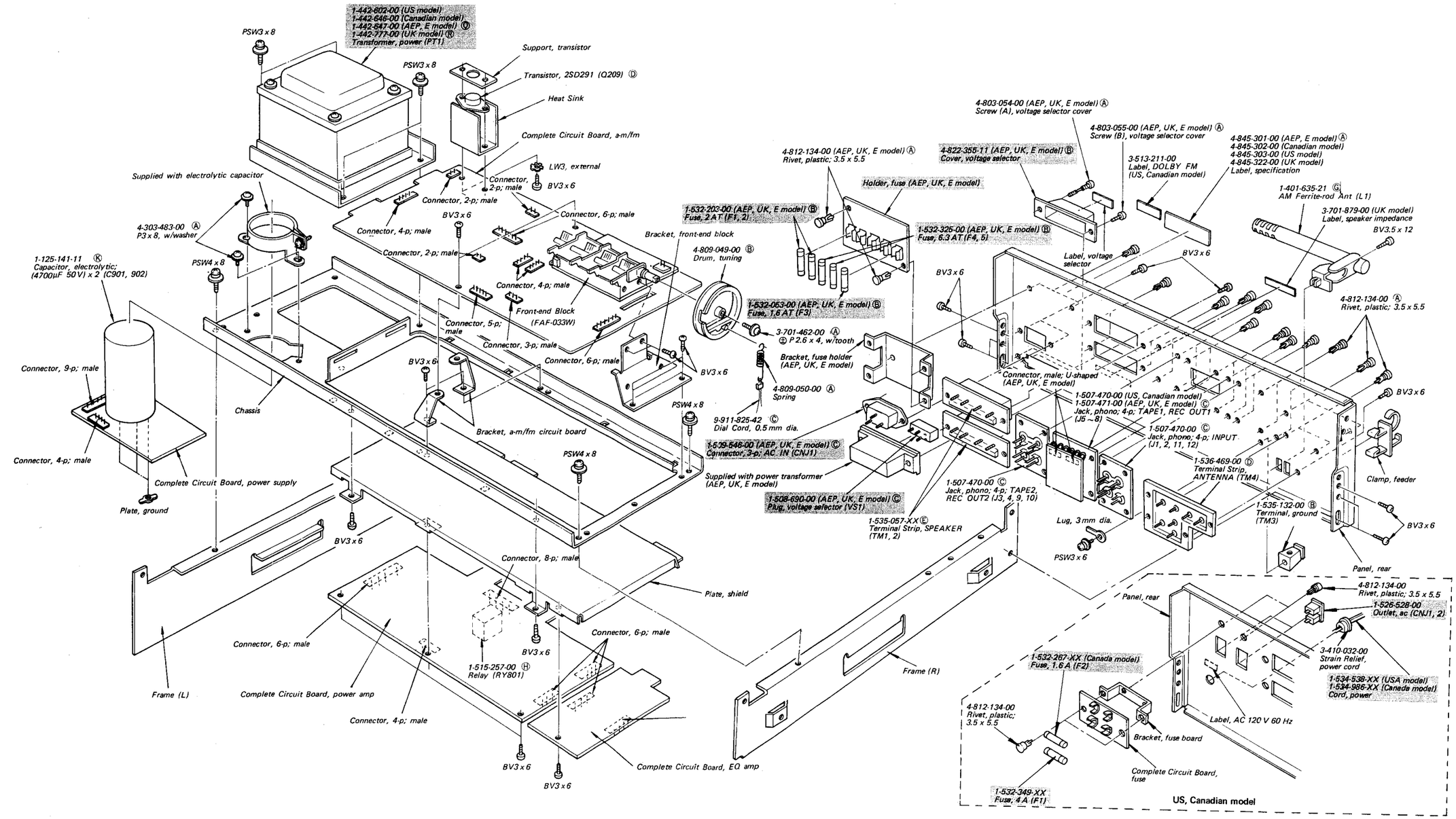

Heat Sink
Printed Circuit Board, IC-1
BV3 x 6
Bracket, heat sink
IC, SS050A (IC751) Ⓛ
Frame (L)
Printed Circuit Board, IC-2
1-518-116-00 Ⓑ Lamp, 11V 360mA; meter (PL3)
Holder, meter lamp
Cover, meter
1-520-236-00 Ⓗ Meter, FM TUNING (ME2)
1-520-235-00 Ⓗ Meter, SIGNAL (ME1)
1-516-628-00 (AEP, UK, E model) Ⓔ
1-516-693-00 (US, Canadian model)
Switch, pushbutton; POWER (S12)
1-518-169-XX Lamp, 4.5 V 40mA; STEREO (PL4) DOLBY FM (PL5) (US, Canadian model)
Bracket (L), dial lamp holder
9-911-863-XX Ⓓ Fiber (t 0.5)
1-518-116-00 Ⓑ Lamp, 11V 360mA; dial (PL1)
3-701-485-00 Ⓐ P3 x 6, w/washer
K3 x 6
Cushion
Holder, dial lamp
Support (L), dial scale
4-838-923-00 Ⓑ Absorber
4-838-918-00 Ⓑ Cushion, dial scale
4-845-323-00 Ⓓ Scale, dial
Cover, edge; dial scale
9-911-815-03 Ⓑ Cushion (t=10)
Support (R), dial scale
1-518-116-00 Ⓑ Lamp, 11V 360mA; dial (PL2)
4-838-962-00 (AEP, UK, E model) Ⓑ
4-840-917-00 (US, Canadian model)
Cover, lamp
Clamp, LED lead
1-536-392-XX Ⓑ Terminal Strip
4-838-961-00 (AEP, UK, E model) Ⓑ
Lable, STEREO
4-840-918-00 (US, Canadian model)
Label, STEREO/DOLBY FM
Subchassis, front
Back Plate Ass'y, dial
Complete Circuit Board, volume control
Connector, 6-p; male
1-516-685-00 Ⓕ Switch, lever slide; MUTING (S5)
1-224-807-00 Ⓔ Resistor, variable; 250 kΩ; VOLUME (RV601, 651)
Bracket, function switch circuit board
4-836-128-00 Ⓑ Knob, MUTING
Supplied with variable resistor
Flywheel Ass'y
Washer, plastic
Shaft, tuning
E5
Pulley Ass'y
Bracket (A), pulley
Bracket (B), pulley
Holder, tuning shaft
Bracket (R), dial lamp holder
Holder, dial lamp
Supplied with speaker switch
Stopper, dial pointer
X-4838-912-1 Ⓘ Pointer Ass'y, dial
Supplied with jack
Collar, jack
1-507-454-00 Ⓒ Jack, HEADPHONES (CNJ3)
Pulley Ass'y
4-845-120-00 Ⓑ Button, FILTER
Complete Circuit Board, headphone jack
Connector, 10-p; male
1-516-946-00 Ⓔ Switch, pushbutton; 2-key; FILTER (S7, 8)
1-516-957-00 Ⓔ Switch, rotary slide; SPEAKER (S9)
Connector, 8-p; male
1-224-811-00 Ⓓ Resistor, variable; 50 kΩ; TREBLE, BASS (RV603, 653, RV604, 654)
Connector, 4-p; male
1-224-810-00 Ⓓ Resistor, variable; 10 kΩ; BALANCE (RV602, 652)
Connector, 6-p; male
1-516-952-00 Ⓔ Switch, rotary slide; ACOUSTIC COMP (S6)
Complete Circuit Board, tone control
Connector, 4-p; male
Connector, 6-p; male
Connector, 10-p; male
Connector, 6-p; male
Supplied with variable resistor
Complete Circuit Board, AUX jack
1-507-453-00 Ⓒ Jack, AUX (CNJ4)
4-845-120-00 Ⓑ Button, MONITOR, MONO, FM MUTING
1-516-955-00 (AEP, UK, E model) Ⓕ Switch, pushbutton; 4-key; MONITOR, MONO, FM MUTING (S2 ~ 4, 10)
1-516-956-00 (US, Canadian model) Switch, pushbutton; 5-key; MONITOR, MONO, FM MUTING, DOLBY FM (S2 ~ 4, 10, 11)
Connector, 6-p; male
Panel, control
Supplied with jack
Connector, 10-p; male
Complete Circuit Board, function switch
1-516-948-00 Ⓖ Switch, rotary; FUNCTION (S1)
Supplied with rotary switch
Bracket, volume control circuit board
Frame (R)

Note: The components identified by shading are critical for safety. Replace only with part number specified.

Note:

- Items with no part number and/or no discription are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (–) = slotted head
- The circled letters (Ⓐ to Ⓩ) are applicable for the European models only.

(3)


1-442-602-00 (US model)
1-442-546-00 (Canadian model)
1-442-547-00 (AEP, E model) Ⓞ
1-442-777-00 (UK model) Ⓡ
Transformer, power (PT1)
PSW3 x 8
Support, transistor
Transistor, 2SD291 (Q209) Ⓓ
Heat Sink
Complete Circuit Board, a-m/fm
LW3, external
BV3 x 6
Connector, 2-p; male
Supplied with electrolytic capacitor
4-303-483-00 Ⓐ P3 x 8, w/washer
PSW4 x 8
1-125-141-11 Ⓚ Capacitor, electrolytic: (4700μF 50V) x 2 (C901, 902)
Connector, 6-p; male
Connector, 4-p; male
Connector, 5-p; male
Connector, 3-p; male
Front-end Block (FAF-033W)
Bracket, front-end block
4-809-049-00 Ⓑ Drum, tuning
1-532-203-00 (AEP, UK, E model) Ⓑ Fuse, 2 AT (F1, 2)
1-532-063-00 (AEP, UK, E model) Ⓑ Fuse, 1.6 AT (F3)
3-701-462-00 Ⓐ ⊕ P2.6 x 4, w/tooth
Bracket, fuse holder (AEP, UK, E model)
4-809-050-00 Ⓐ Spring
9-911-825-42 Ⓒ Dial Cord, 0.5 mm dia.
1-539-546-00 (AEP, UK, E model) Ⓒ Connector, 3-p; AC IN (CNJ1)
Supplied with power transformer (AEP, UK, E model)
1-508-690-00 (AEP, UK, E model) Ⓒ Plug, voltage selector (VST)
1-535-057-XX Ⓔ Terminal Strip, SPEAKER (TM1, 2)
Connector, 9-p; male
Connector, 4-p; male
Plate, ground
Chassis
Complete Circuit Board, power supply
Bracket, a-m/fm circuit board
Connector, 8-p; male
Plate, shield
Frame (L)
Frame (R)
Connector, 6-p; male
Complete Circuit Board, power amp
1-515-257-00 Ⓗ Relay (RY801)
Complete Circuit Board, EQ amp
4-812-134-00 (AEP, UK, E model) Ⓐ Rivet, plastic; 3.5 x 5.5
4-822-355-11 (AEP, UK, E model) Ⓑ Cover, voltage selector
Holder, fuse (AEP, UK, E model)
1-532-326-00 (AEP, UK, E model) Ⓑ Fuse, 6.3 AT (F4, 5)
4-803-054-00 (AEP, UK, E model) Ⓐ Screw (A), voltage selector cover
4-803-055-00 (AEP, UK, E model) Ⓐ Screw (B), voltage selector cover
3-513-211-00 Label, DOLBY FM (US, Canadian model)
4-845-301-00 (AEP, E model) Ⓐ
4-845-302-00 (Canadian model)
4-845-303-00 (US model)
4-845-322-00 (UK model)
Label, specification
Label, voltage selector
1-401-635-21 Ⓖ AM Ferrite-rod Ant (L1)
3-701-879-00 (UK model) Label, speaker impedance
BV3.5 x 12
Connector, male; U-shaped (AEP, UK, E model)
1-507-470-00 (US, Canadian model)
1-507-471-00 (AEP, UK, E model) Ⓒ Jack, phono; 4-p; TAPE1, REC OUT1 (J5 ~ 8)
1-507-470-00 Ⓒ Jack, phono; 4-p; INPUT (J1, 2, 11, 12)
1-507-470-00 Ⓒ Jack, phono; 4-p; TAPE2, REC OUT2 (J3, 4, 9, 10)
1-536-469-00 Ⓓ Terminal Strip, ANTENNA (TM4)
1-535-132-00 Ⓑ Terminal, ground (TM3)
Clamp, feeder
Lug, 3 mm dia.
Panel, rear
US, Canadian model
4-812-134-00 Rivet, plastic; 3.5 x 5.5
1-526-528-00 Outlet, ac (CNJ1, 2)
3-410-032-00 Strain Relief, power cord
1-534-538-XX (USA model)
1-534-986-XX (Canada model)
Cord, power
1-532-267-XX (Canada model) Fuse, 1.6 A (F2)
Label, AC 120 V 60 Hz
Bracket, fuse board
Complete Circuit Board, fuse
1-532-349-XX Fuse, 4 A (F1)

Note:

- Items with no part number and/or no discription are not stocked because they are seldom required for routine service.
- All screws are Phillips (cross recess) type unless otherwise noted.
  (–) = slotted head
- The circled letters (Ⓐ to Ⓩ) are applicable for the European models only.

Note: The components identified by shading are critical for safety. Replace only with part number specified.

SECTION 6
ELECTRICAL PARTS LIST

Note: The circled letters (Ⓐ to Ⓩ) are applicable for the European models only.

Ref. No.	*Part No.*	*Description*
		SEMICONDUCTORS
		Transistors
⇒Q201, 202		Ⓑ2SC403C
⇒Q203		Ⓑ2SC632A
Q204		Ⓑ2SC945
⇒Q205, 206		Ⓑ2SC632A
Q207, 208		Ⓑ2SC945
Q209		Ⓓ2SD291
⇒Q210		Ⓑ2SC403C
Q211		Ⓑ2SC945
⇒Q401～403		Ⓑ2SC403C
Q405, 406		Ⓑ2SC710
Q501, 551		Ⓑ2SC1636
Q502, 552		Ⓑ2SA705
Q601, 651		Ⓑ2SC1636
Q602, 652		Ⓑ2SA705
Q603, 653		Ⓑ2SC632A
Q701, 751		Ⓑ2SA705
Q703, 753		Ⓒ2SA896
Q704, 754		Ⓒ2SC1811
⇒Q705, 755		Ⓒ2SA678
⇒Q706, 756, Q707, 757		Ⓑ2SC634A
⇒Q708, 758		Ⓒ2SA678
⇒Q801～803		Ⓒ2SA678
⇒Q804		Ⓑ2SC634A
Q805		Ⓒ2SC1811
Q931		Ⓔ2SC1124
Q932		Ⓒ2SA706
		ICs
IC201		ⒽHA1137W
IC202		ⒿHA1156
IC701, 751		ⓁSS050A

⇒ : Due to replacement parts, the descriptions are different from the diagrams.

Ref. No.	*Part No.*	*Description*
		Diodes
D1		ⒽTX312
⇒D201, 202		Ⓑ1S1555
D203		Ⓑ1T22A
⇒D204		ⒷEQB01-26
D205		Ⓑ10E2
⇒D261		Ⓑ1S1555
⇒D401, 402		Ⓑ1S1555
D403, 404		Ⓑ1T22A
D601		Ⓑ1S1555
D701, 751		ⒷVD1221
D702～705, D752～755		Ⓑ1S1555
D801～803		Ⓑ1S1555
D804		Ⓑ1T243M
D805, 806		Ⓑ1S1555
D901～904		ⒸU05E
D911, 912		Ⓑ10E2
D913, 914		Ⓑ10D2
⇒D931, 932		ⒷEQB01-21
		THERMISTOR
Pth801, 851	1-800-427-00	Ⓑ Positive
		COILS
L1	1-401-635-21	Ⓖ AM Ferrite-rod Ant
L201	1-459-152-00	Ⓑ 18 μH
L401	1-407-169-XX	Ⓐ microinductor, 100 μH
L402	1-407-182-XX	Ⓐ microinductor, 2.2 μH
L403	1-405-656-00	Ⓑ AM Osc
L404	1-407-178-XX	Ⓐ microinductor, 1 μH
L405	1-407-182-XX	Ⓐ microinductor, 2.2 μH

Note: The components identified by shading are critical for safety. Replace only with part number specified.

Note: The circled letters (Ⓐ to Ⓩ) are applicable for the European models only.

Ref. No.	Part No.	Description
	TRANSFORMERS	
B1	1-417-014-31	Ⓑ Balun
IFT201	1-404-029-00	Ⓒ FM Discriminator
IFT401	1-404-014-11	AM IFT (US, Canadian model)
	1-404-014-21	Ⓓ AM IFT (AEP, UK, E model)
IFT402	1-403-149-00	Ⓑ AM IFT
PT1	1-442-602-00	Power (US model)
	1-442-646-00	Power (Canadian model)
	1-442-647-00	Ⓠ Power (AEP, E model)
	1-442-777-00	Ⓡ Power (UK model)
	FILTERS	
CF201, 202	1-527-248-XX	Ⓗ Ceramic
LPF201	1-231-219-00	Ⓓ Low-pass
	CAPACITORS	

All capacitors are in μF and of electrolytic unless otherwise noted. (p = μμF)
50 and/or less working voltages are omitted except for electrolytic type.

Ref. No.	Part No.			
C101	1-121-970-11	Ⓐ 47	16 V	
C102	1-101-924-11	Ⓐ 0.022		ceramic
C201 ~ 203	1-101-924-11	Ⓐ 0.022		ceramic
C206	1-101-924-11	Ⓐ 0.022		ceramic
C207 ~ 209	1-101-925-11	Ⓐ 0.047		ceramic
C210	1-121-391-11	Ⓐ 1	50 V	
C211	1-102-820-11	Ⓐ 330 p		ceramic
C212	1-121-391-11	Ⓐ 1	50 V	
C213	1-121-415-11	Ⓑ 100	16 V	
C214	1-101-925-11	Ⓐ 0.047		ceramic
C215, 216	1-101-924-11	Ⓐ 0.022		ceramic
C217	1-101-925-11	Ⓐ 0.047		ceramic
C218	1-121-726-11	Ⓐ 0.47	50 V	
C219	1-121-392-11	Ⓐ 3.3	25 V	
C220, 221	1-121-651-11	Ⓐ 10	16 V	
C222	1-121-972-11	Ⓑ 220	16 V	
C223	1-121-651-11	Ⓐ 10	16 V	
C224	1-103-717-11	Ⓐ 470 p		polystyrol
C225	1-101-924-11	Ⓐ 0.022		ceramic
C226	1-108-246-12	Ⓐ 0.047		mylar
C227	1-121-651-11	Ⓐ 10	16 V	
C228, 229	1-121-726-11	Ⓐ 0.47	50 V	
C230	1-127-019-11	Ⓑ 0.1	10 V	solid aluminum
C231	1-123-068-11	Ⓑ 220	16 V	
C232, 233	1-108-580-12	Ⓐ 0.011		mylar (AEP, UK, E model)
	1-108-571-12	0.0047		mylar (US, Canadian model)
C234	1-101-924-11	Ⓐ 0.022		ceramic
C235, 236	1-108-573-12	Ⓐ 0.0056		mylar (AEP, UK, E model)
	1-108-581-12	0.012		mylar (US, Canadian model)
C239	1-121-651-11	Ⓐ 10	16 V	
C240	1-127-021-11	Ⓑ 0.33	10 V	solid aluminum
C241	1-101-880-11	Ⓐ 47 p		ceramic
C242	1-121-651-11	Ⓐ 10	16 V	
C243	1-127-021-11	Ⓑ 0.33	10 V	solid aluminum
C244	1-101-880-11	Ⓐ 47 p		ceramic
C245	1-121-651-11	Ⓐ 10	16 V	
C246	1-123-068-11	Ⓑ 220	16 V	
C247	1-121-936-11	Ⓑ 220	25 V	
C251, 252	1-102-732-11	Ⓐ 75 p		ceramic
C261	1-102-959-11	Ⓐ 22 p		ceramic
	(US, Canadian model)			
C301, 351	1-121-391-11	1	50 V	
C302, 352	1-121-479-11	22	16 V	
C303, 353	1-102-947-11	10 p		ceramic
C305, 355	1-131-198-11	6.8	16 V	tantalum
C307, 357	1-121-409-11	47	16 V	
C308, 358	1-121-391-11	1	50 V	
C309, 359	1-108-244-12	0.033		mylar
C310, 360	1-131-196-11	2.2	20 V	tantalum
C311, 361	1-108-603-12	0.1		mylar
C312, 362	1-108-585-12	0.018		mylar
C313, 363	1-108-587-12	0.022		mylar
C314, 364	1-121-391-11	1	50 V	
C315, 365	1-121-395-11	4.7	25 V	
C316, 366	1-108-230-12	0.0022		mylar
C317, 367	1-121-415-11	100	16 V	
C391	1-121-651-11	10	16 V	

Note: The components identified by shading are critical for safety. Replace only with part number specified.

Note: The circled letters (Ⓐ to Ⓩ) are applicable for the European models only.

Ref. No.	*Part No.*	*Description*		
C401～403	1-101-924-11	Ⓐ 0.022		ceramic
C404	1-121-479-11	Ⓐ 22	16 V	
C405	1-101-924-11	Ⓐ 0.022		ceramic
C406, 407	1-121-450-11	Ⓐ 2.2	50 V	
C408, 409	1-101-924-11	Ⓐ 0.022		ceramic
C410	1-121-352-11	Ⓐ 47	10 V	
C411, 412	1-101-924-11	Ⓐ 0.022		ceramic
C413	1-121-409-11	Ⓐ 47	16 V	
C415	1-108-277-12	Ⓐ 0.001		mylar
C416	1-108-355-12	Ⓐ 0.0056		mylar
C417	1-121-413-11	Ⓐ 100	6.3 V	
C418	1-108-249-12	Ⓐ 0.068		mylar
C419	1-108-239-12	Ⓐ 0.01		mylar
C420	1-121-409-11	Ⓐ 47	16 V	
C421	1-102-953-11	Ⓐ 18 p		ceramic
C422	1-103-714-11	Ⓐ 360 p		polystyrol
C423	1-101-924-11	Ⓐ 0.022		ceramic
C424	1-101-924-11	Ⓐ 0.022		ceramic
C425	1-108-239-12	Ⓐ 0.01		mylar
C426, 431	1-101-924-11	Ⓐ 0.022		ceramic
C501, 551	1-121-913-11	Ⓐ 3.3	25 V	
C502, 552	1-102-959-11	Ⓐ 22 p		ceramic
C503, 553	1-102-824-11	Ⓐ 470 p		ceramic
C504, 554	1-108-573-12	Ⓐ 0.0056		mylar
C505, 555	1-108-561-12	Ⓑ 0.0018		mylar
C506, 556	1-123-077-11	Ⓑ 470	6.3 V	(explosion proof)
C507, 557	1-121-912-11	Ⓐ 1	50 V	
C601, 651	1-102-976-11	Ⓐ 180 p		ceramic
C602, 652	1-108-230-12	Ⓐ 0.0022		mylar
C603, 653	1-108-244-12	Ⓐ 0.033		mylar
C604, 654	1-108-246-12	Ⓐ 0.047		mylar
C605, 655	1-108-227-11	Ⓐ 0.001		mylar
C606, 656	1-121-912-11	Ⓐ 1	50 V	
C607, 657	1-102-978-11	Ⓐ 220 p		ceramic
C608, 658	1-121-413-11	Ⓐ 100	6.3 V	
C609, 659	1-102-959-11	Ⓐ 22 p		ceramic
C610, 660	1-121-916-11	Ⓑ 10	16 V	
C611, 661 C612, 662	1-108-246-12	Ⓐ 0.047		mylar
C613, 663	1-108-228-12	Ⓐ 0.0015		mylar
C614, 664	1-121-916-11	Ⓑ 10	16 V	
C615, 665	1-121-913-11	Ⓐ 3.3	25 V	
C616, 666	1-102-963-11	Ⓐ 33 p		ceramic
C617, 667	1-121-915-11	Ⓐ 4.7	25 V	
C618, 668	1-121-413-11	Ⓐ 100	6.3 V	
C619, 669	1-108-585-12	Ⓑ 0.018		mylar
C620, 670	1-108-603-12	Ⓑ 0.1		mylar
C701, 751	1-102-116-11	Ⓐ 680 p		ceramic
C702, 752	1-121-912-11	Ⓐ 1	50 V	
C703, 753	1-123-076-11	Ⓑ 330	6.3 V	
C704, 754	1-102-973-11	Ⓐ 100 p		ceramic
C706, 756	1-121-413-11	Ⓐ 100	6.3 V	
C708, 758 C709, 759	1-123-056-11	Ⓑ 22	50 V	
C710, 760	1-108-244-12	Ⓐ 0.033		mylar
C761	1-121-413-11	Ⓐ 100	6.3 V	
C801	1-121-419-11	Ⓑ 220	6.3 V	
C802	1-121-479-11	Ⓐ 22	16 V	
C803	1-121-419-11	Ⓑ 220	6.3 V	
C804	1-101-004-11	Ⓐ 0.01		ceramic
C901, 902	1-125-141-11	Ⓚ 4700	50 V	
C911, 912	1-121-937-11	Ⓑ 220	50 V	
C913, 914	1-108-251-12	Ⓑ 0.1		mylar
C915, 916	1-121-937-11	Ⓑ 220	50 V	
C921, 922	1-121-935-11	Ⓑ 100	25 V	
C931, 932	1-123-062-11	Ⓑ 100	35 V	
C933, 934	1-108-239-12	Ⓐ 0.01		mylar
C935～938	1-121-935-11	Ⓑ 100	25 V	
C951～954	1-108-433-12	Ⓑ 0.1	200 V	mylar
CT401, 402	1-141-147-XX	Ⓑ 15 p		trimmer

RESISTORS

All resistors are in Ω. Regular-type ¼W carbon resistors are omitted.
Check the schematic diagram for the resistance values.
(k = 1000, M = 1000 k)

R1	1-202-719-11	1M	½W	composition (US, Canadian model)

Note: The components identified by shading are critical for safety. Replace only with part number specified.

Note: The circled letters (Ⓐ to Ⓩ) are applicable for the European models only.

Ref. No.	*Part No.*	*Description*			
R101	1-211-530-11	Ⓐ 220	¼ W	carbon (nonflammable)	
R208	1-211-518-11	Ⓐ 68	¼ W	carbon (nonflammable)	
R214	1-211-524-11	Ⓐ 120	¼ W	carbon (nonflammable)	
R236	1-202-559-11	Ⓐ 270	½ W	composition (nonflammable)	
R237, 242	1-211-522-11	Ⓐ 100	¼ W	carbon (nonflammable)	
R314, 364	1-246-486-11	3.6 k ±2%	¼ W	carbon (US, Canadian model)	
R318, 368	1-246-472-11	910 ±2%	¼ W	carbon (US, Canadian model)	
R319, 369	1-246-464-11	430 ±2%	¼ W	carbon (US, Canadian model)	
R322, 372	1-211-522-11	100	¼ W	carbon (nonflammable) (US, Canadian model)	
R401	1-244-891-11	5.6 k	½ W	carbon (US, Canadian model)	
R419, 424	1-211-522-11	Ⓐ 100	¼ W	carbon (nonflammable)	
R603	1-202-561-11	330	½ W	composition (US, Canadian model)	
R706, 756	1-211-514-11	Ⓐ 47	¼ W	carbon (nonflammable)	
R712, 762 R713, 763	1-211-538-11	Ⓐ 470	¼ W	carbon (nonflammable)	
R715, 765	1-202-525-11	Ⓐ 10	½ W	composition	
R716, 766	1-202-517-11	Ⓐ 4.7	½ W	composition	
R718, 719	1-202-565-11	Ⓐ 470	½ W	composition	
R767	1-202-595-11	Ⓐ 8.2 k	½ W	composition	
R768, 769	1-202-565-11	Ⓐ 470	½ W	composition	
R805	1-211-515-11	Ⓐ 51	¼ W	carbon (nonflammable)	
R808	1-202-597-11	Ⓐ 10 k	½ W	composition	
R812	1-202-561-11	Ⓐ 330	½ W	composition	
R813	1-211-538-11	Ⓐ 470	¼ W	carbon (nonflammable)	
R911, 912	1-212-857-11	Ⓐ 10	¼ W	fusible	
R913	1-211-582-11	Ⓐ 4.7	½ W	carbon (nonflammable)	
R914	1-213-213-11	Ⓑ 18	1 W	fusible	
R915, 916	1-211-515-11	Ⓐ 51	¼ W	carbon (nonflammable)	
R921, 922	1-211-530-11	Ⓐ 220	¼ W	carbon (nonflammable)	
R931, 932	1-211-945-11	Ⓐ 2.2 k	¼ W	carbon (nonflammable)	
R935, 936	1-211-515-11	Ⓐ 51	¼ W	carbon (nonflammable)	
RT201	1-224-647-XX	Ⓑ 47 k		adjustable	
RT202	1-224-648-XX	Ⓑ 100 k		adjustable	
RT203	1-224-644-XX	Ⓑ 4.7 k		adjustable	
RT204	1-224-647-XX	Ⓑ 47 k		adjustable	
RT205	1-224-647-XX	Ⓑ 47 k		adjustable	
RV601, 651	1-224-807-00	Ⓔ 250 k		variable, VOLUME	
RV602, 652	1-224-810-00	Ⓓ 10 k		variable, BALANCE	
RV603, 653 RV604, 654	1-224-811-00	Ⓓ 50 k		variable, TREBLE, BASS	

SWITCHES

S1	1-516-948-00	Ⓖ	Rotary, FUNCTION
S2～4, 10	1-516-955-00	Ⓕ	Pushbutton, 4-key; MONITOR, MONO, FM MUTING (AEP, UK, E model)
S2～4, 10, 11	1-516-956-00		Pushbutton, 5-key; MONITOR, MONO, FM MUTING, DOLBY FM (US, Canadian model)
S5	1-516-685-00	Ⓕ	Lever Slide, MUTING
S6	1-516-952-00	Ⓔ	Rotary Slide, ACOUSTIC COMP
S7, 8	1-516-946-00	Ⓔ	Pushbutton, 2-key; FILTER
S9	1-516-957-00	Ⓔ	Rotary Slide, SPEAKER
S12	1-516-628-00	Ⓔ	Pushbutton; POWER (AEP, UK, E model)
	1-516-693-00		Pushbutton; POWER (US, Canadian model)
SE1, 2	1-516-954-00	Ⓑ	De-emphasis (AEP, UK, E model)

FUSES

F1	1-532-349-XX	4 A (US, Canadian model)

Note: The components identified by shading are critical for safety. Replace only with part number specified.

Note: The circled letters (Ⓐ to Ⓩ) are applicable for the European models only.

Ref. No.	*Part No.*	*Description*
F2	1-532-267-XX	1.6 A (Canadian model)
F1, 2	1-532-203-00	Ⓑ 2 AT (AEP, UK, E model)
F3	1-532-053-00	Ⓑ 1.6 AT (AEP, UK, E model)
F4, 5	1-532-325-00	Ⓑ 6.3 AT (AEP, UK, E model)

JACKS

CNJ1, 2	1-526-528-00	AC OUTLET (US, Canadian model)
CNJ1	1-509-546-00	Ⓒ Connector, 3-p; AC IN (AEP, UK, E model)
CNJ2	1-509-549-00	Ⓑ Connector, REC/PB (AEP, UK, E model)
CNJ3	1-507-454-00	Ⓒ HEADPHONES
CNJ4	1-507-453-00	Ⓒ AUX
J1, 2 J11, 12	1-507-470-00	Ⓒ Phono, 4-p; PHONO, AUX
J3, 4 J9, 10	1-507-470-00	Ⓒ Phono, 4-p; TAPE 2, REC OUT 2
J5～8	1-507-471-00	Ⓒ Phono, 4-p; TAPE 1, REC OUT 1 (AEP, UK, E model)
	1-507-470-00	Phono, 4-p; TAPE 1, REC OUT 1 (US, Canadian model)

Ref. No.	*Part No.*	*Description*

MISCELLANEOUS

CP1	1-231-057-31	Encapsulated Component (US, Canadian model)
ME1	1-520-235-00	Ⓗ Meter, SIGNAL
ME2	1-520-236-00	Ⓗ Meter, FM TUNING
PL1～3	1-518-116-00	Ⓑ Lamp, 11 V 360 mA; dial, meter
PL4	1-518-169-XX	Ⓑ Lamp, 4.5 V 40 mA; STEREO
PL5	1-518-169-XX	Lamp, 4.5 V 50 mA, DOLBY FM (US, Canadian model)
RY801	1-515-257-00	Ⓗ Relay
TM1, 2	1-535-057-XX	Ⓔ Terminal Strip, SPEAKER
TM3	1-535-132-00	Ⓑ Terminal, ground
TM4	1-536-469-00	Ⓓ Terminal Strip, ANTENNA
VS1	1-508-690-00	Ⓒ Plug, voltage selector (AEP, UK, E model)
	1-534-538-XX	Cord, power (US model)
	1-534-986-XX	Cord, power (Canadian model)
	1-536-392-XX	Ⓑ Terminal Strip

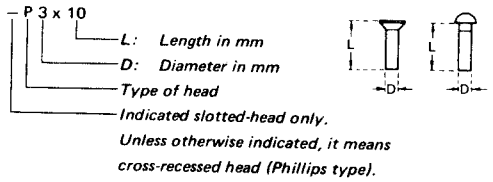
ACCESSORIES AND PACKING MATERIALS

Part No.	*Description*
X-4490-002-2	Ⓑ Cloth Ass'y, polishing
1-501-161-00	Ⓕ Ribbon Antenna, fm
1-506-113-00	Ⓑ Plug, shorting
1-526-565-00	Ⓑ Adaptor, ac plug (E model)
1-534-754-00	Ⓔ Cord, power (E model)
1-534-819-00	Ⓖ Cord, power; 3-p (UK model)
3-780-941-11	Ⓕ Manual, instruction (AEP model)
3-780-941-12	Ⓕ Manual, instruction (UK, E model)
3-780-941-21	Manual, instruction (US, Canadian model)
3-793-991-31	Manual, instruction; French (Canadian model)
4-828-909-00	Ⓑ Bag, plastic; unit
4-845-131-00	Ⓒ Cushion (US, Canadian, AEP, E model)
4-845-306-00	Ⓗ Carton (AEP, E model)
4-845-307-00	Carton (US, Canadian model)
4-845-324-00	Ⓒ Cushion (UK model)
4-845-325-00	Ⓗ Carton (UK model)

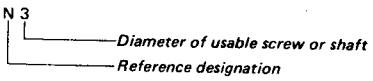
Note: The components identified by shading are critical for safety. Replace only with part number specified.

HARDWARE NOMENCLATURE

Screw:



Nut, Washer, Retaining ring:



Reference Designation	Shape	Description	Remarks
SCREWS			
P		pan-head screw	binding-head (B) screw for replacement
PWH		pan-head screw with washer face	binding-head (B) screw and flat washer for replacement
PS PSP		pan-head screw with spring washer	binding-head (B) screw and spring washer for replacement
PSW PSPW		pan-head screw with spring and flat washers	binding-head (B) screw and spring and flat washers for replacement
R		round-head screw	binding-head (B) screw for replacement
K		flat-countersunk-head screw	
RK		oval-countersunk-head screw	
B		binding-head screw	
T		truss-head screw	binding-head (B) screw for replacement
F		flat-fillister-head screw	
RF		fillister-head screw	
BV		braizer-head screw	

Reference Designation	Shape	Description	Remarks
SELF-TAPPING SCREWS			
TA		self-tapping screw	ex: TA, P 3 x 10
PTP		pan-head self-tapping screw	binding-head self-tapping (TA, B) screw for replacement
PTPWH		pan-head self-tapping screw with washer face	binding-head self tapping (TA, B) screw and flat washer for replacement
PTTWH		pan-head thread-rolling screw with washer face	binding-head (B) screw and flat washer for replacement
SET SCREWS			
SC		set screw	
SC		hexagon-socket set screw	ex: SC 2.6 x 4, hexagon socket
NUT			
N		nut	
WASHERS			
W		flat washer	
SW		spring washer	
LW		internal-tooth lock washer	ex: LW3, internal
LW		external-tooth lock washer	ex: LW3, external
RETAINING RINGS			
E		retaining ring	
G		grip-type retaining ring	

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